

SILICON CONTROLLED RECTIFIERS (SCR)**(FOR PHASE CONTROL APPLICATIONS)**

T-25-01

DC or Pk Volts V_{DRM}	$I_{T(RMS)}$ Maximum Forward Current Amps (All Conducting Angles)										
	0.8A Sensitive Gate	3A Sensitive Gate	4A Sensitive Gate		5A		7A	8A Sensitive Gate		8A	10A
25										NTE5480	
30	NTE5400		NTE5411	NTE5452							
50				NTE5453	NTE5470			NTE5442		NTE5481	NTE5461
60	NTE5401		NTE5412								
100	NTE5402		NTE5413	NTE5454	NTE5471					NTE5482	NTE5462
150	NTE5403										
200	NTE5404	NTE5408	NTE5414	NTE5455	NTE5472	NTE5511	NTE5427	NTE5444		NTE5483	NTE5463
250											
300				NTE5456	NTE5473					NTE5484	
400	NTE5405	NTE5409	NTE5415	NTE5457	NTE5474	NTE5512	NTE5428	NTE5446	NTE5437	NTE5485	NTE5465
500					NTE5475					NTE5486	
600	NTE5406	NTE5410	NTE5416	NTE5458	NTE5476	NTE5513	NTE5429	NTE5448	NTE5438	NTE5487	NTE5466
700											
800											NTE5468
1200											
$I_{GT} \text{ Max}^*$	200 μ A#	10mA	200 μ A#	200 μ A#	10mA	15mA	25mA	30mA	200 μ A#	30mA	15mA
$V_{GT} \text{ Max (V)}$	0.8	1.5	1.0	1.5	1.5	2.0	1.5	1.5	0.08	1.5	1.5
$I_{Hold} \text{ Max (mA)}$	5	20	5	3	25	20	50	40	3	30	20
$V_F(\text{on}) \text{ (V)}$	1.7	1.6	2.0	2.2	2.0	2.8	2.6	1.5	1.6	2.0	2.0
$I_{Surge} \text{ (A)}$	20	30	25	20	100	60	100	80	100	100	100
$V_{GFM} \text{ (V)}$	8	10	6	6	6	10	—	10	6	10	6
$V_{GRM} \text{ (V)}$	8	10	6	6	6	5	—	10	6	10	6
Diag. No.	9m	25c	7c	10f	110b	6b	25c	33b	11e	110b	11e
Mounting Torque in•lb (m•N)	—	—	—	—	20 (2.22)	—	—	—	—	20 (2.22)	—
Thread Size	—	—	—	—	10-32 UNF-2A	—	—	—	—	10-32 UNF-2A	—
Case Style	TO92	TO5	TO126	TO202	TO64	TO66	TO5	TO127	TO220	TO64	TO220

Connect a 1K Ω resistor between the gate and cathode.* $I_{GT} \text{ (max)}$ is the maximum gate current required to switch a thyristor to the on state.
This value is positive for P-Gate and negative for N-Gate thyristors.

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DC or Pk Volts V_{DRM}	$I_T(RMS)$ Maximum Forward Current Ampe (All Conducting Angles)										
	10A Sensitive Gate		10A	12.5A	16A	20A	25A		35A		35A
25					NTE5500		NTE5520				
30											
50					NTE5501		NTE5521	NTE5550	NTE5541		
60											
100			NTE5491		NTE5502		NTE5522		NTE5542		
150					NTE5503		NTE5523				
200	NTE5417		NTE5492		NTE5504	NTE5514	NTE5524	NTE5552	NTE5543	NTE5517	NTE5562
250					NTE5505		NTE5525				
300					NTE5506		NTE5526		NTE5544		
400	NTE5418	NTE5426	NTE5494	NTE314	NTE5507	NTE5515	NTE5527	NTE5554	NTE5545	NTE5518	NTE5564
500					NTE5508		NTE5528		NTE5546		
600	NTE5419		NTE5496		NTE5509	NTE5516	NTE5529	NTE5556	NTE5547	NTE5519	NTE5566
700							NTE5530				
800							NTE5531	NTE5558	NTE5548		
1200											
$I_{GT} \text{ Max}^*$	15mA	200 μ A	15mA	40mA	30mA	15mA	40mA	30mA	30mA	30mA	30mA
$V_{GT} \text{ Max (V)}$	1.5	0.8	2	2	1.5	2	3	1.5	2	2	2
$I_{Hold} \text{ Max (mA)}$	30	3	20	50	40	20	50	40	50	50	50
$V_{F(on)} \text{ (V)}$	1.6	1.6	2.5	1.8	1.6	2.4	2	1.6	1.6	1.6	1.6
$I_{Surge} \text{ (A)}$	100	100	100	200	150	200	150	300	300	300	300
$V_{GFM} \text{ (V)}$	—	—	10	—	10	10	10	—	10	10	10
$V_{GRM} \text{ (V)}$	—	—	10	—	5	5	5	—	10	10	10
Diag. No.	11d	11d	111b	118	111b	112	111b	11e	111b	111b	113a
Mounting Torque in $\text{lb (m}\cdot\text{N)}$	—	—	30 (3.33)	—	30 (3.33)	—	30 (3.33)	—	30 (3.33)	30 (3.33)	30 (3.33)
Thread Size	—	—	1/4-28 UNF-2A	—	1/4-28 UNF-2A	—	1/4-28 UNF-2A	—	1/4-28 UNF-2A	1/4-28 UNF-2A	1/4-28 UNF-2A
Case Style	TO220 Isolated	TO220 Isolated	TO48	TO3	TO48	1/2" Press Fit	TO48	TO220	TO48	TO48	TO48 Isol Stud

* $I_{GT} \text{ (max)}$ is the maximum gate current required to switch a thyristor to the on state.
This value is positive for P-Gate and negative for N-Gate thyristors.

SILICON CONTROLLED RECTIFIERS (SCR)**(FOR PHASE CONTROL APPLICATIONS)**

T-25-01

DC or Pk Volts V _{DRM}	I _{T(RMS)} Maximum Forward Current Amps (All Conducting Angles)											
	40A	50A	55A	65A	80A	125A		275A	470A	550A	850A	1800A
200					NTE5567	NTE5570	NTE5575	NTE5580	NTE5590		NTE5594	
250												
300												
400			NTE5539									
500												
600				NTE5534	NTE5568	NTE5572	NTE5577	NTE5582	NTE5591	NTE5587	NTE5595	NTE5598
700												
800	NTE5536	NTE5538	NTE5540									
1200					NTE5569	NTE5574	NTE5579	NTE5584	NTE5592	NTE5589	NTE5596	NTE5599
I _{GT} Max*	50mA	80mA	40mA	25mA	100mA	150mA	150mA	150mA	150mA	150mA	150mA	200mA
V _{GT} Max (V)	1.5	3	1.5	2	2.5	3	3	3	3	3	3	3
I _{Hold} Max (mA)	60	150	60	50	200	—	—	—	—	—	—	—
V _{F(on)} (V)	1.6	2	1.8	1.8	1.6	1.95	2.2	1.5	1.55	1.4	1.4	1.35
I _{Surge} (A)	400	525	650	700	1255	1800	1600	5500	5500	10,000	10,000	27,000
V _{GFM} (V)	—	15	—	—	20	4	—	4	5	5	5	5
V _{GRM} (V)	—	5	—	—	5	5	5	5	5	5	5	5
Diag. No.	11e	55c	55c	382a	117	114	115	116	347	177	346	404
Mounting Torque in•lb (m•N)	—	—	—	—	30 (3.33)	130 (14.46)	130 (14.46)	360 (40.06)	1400 lbs (6.2 kN)	360 (40.06)	2400 lbs (10.7 kN)	5500 lbs (24.5 kN)
Thread Size	—	—	—	—	1/4–28 UNF–2A	1/2–20 UNF–2A	1/2–20 UNF–2A	3/4–16 UNF–2A	—	3/4–16 UNF–2A	—	—
Case Style	TO220	TO218 Isolated	TO218	TO3 Isolated Square Pack	TO65	TO94	TO83	TO93	Hockey Puck 1.65" Dia	TO118	Hockey Puck 2.3" Dia	Hockey Puck 2.9" Dia

* I_{GT} (max) is the maximum gate current required to switch a thyristor to the on state.
This value is positive for P-Gate and negative for N-Gate thyristors.

SILICON CONTROLLED RECTIFIERS (SCR)**(FOR HIGH SPEED SWITCHING)**

T-25-01

DC or Pk Volts V_{DRM}	$I_T(RMS)$ Maximum Forward Current Amps (All Conducting Angles)							
	5A	35A	125A		275A	400A	475A	700A
800	NTE5351	NTE5360	NTE5368	NTE5371	NTE5374	NTE5380	NTE5377	NTE5386
1200			NTE5369	NTE5372	NTE5375	NTE5381	NTE5378	NTE5387
I_{GT} Max	50mA	180mA	150mA	150mA	150mA	150mA	150mA	150mA
V_{GT} Max (V)	2	3	3	3	3	3	3	3
I_{Hold} Max (mA)	100	150	—	—	—	—	—	—
$V_F(on)$ Max (V)	2.06	2.05	3.2	3.3	1.85	1.85	1.45	1.45
I_{Surge} (A)	90	180	1400	1400	4500	4500	8000	8000
Repetitive di/dt Amps/ μ s Max	—	—	150	150	300	300	400	400
Non-Repetitive di/dt Amps/ μ s Max	500	400	800	800	800	800	500	800
dv/dt Volts/ μ s Max	400 (Typ)	200	200	200	300	300	300	300
Turn-Off t_q μ s Max	2.9 (Typ)	10	10	10	10	15	25	25
Diag. No.	6b	111b	115	114	116	347	177	346
Mounting Torque in lb (mN)	—	30 (3.33)	130 (14.46)	130 (14.46)	360 (40.06)	1400 lbs (6.2 kN)	360 (40.06)	2400 lbs (10.7 kN)
Thread Size	—	1/4-28 UNF-2A	1/2-20 UNF-2A	1/2-20 UNF-2A	3/4-16 UNF-2A	—	3/4-16 UNF-2A	—
Case Style	TO66	TO48	TO83	TO94	TO93	Hockey Puck 1.65" Dia	TO118	Hockey Puck 2.3" Dia

SILICON CONTROLLED RECTIFIERS (SCR)**(HIGH SPEED SWITCHING APPLICATIONS)**

NTE Type Number	Description and Application	Case Style	Diagram Number	Repetitive Peak Forward Off-State Voltage (Volts)	RMS On-State Current (Amps)	Peak Forward Surge Current (Amps)	Maximum Ratings				Typical Reverse Recovery Time (μ s)
				V_{DRM}	$I_T(RMS)$	I_{TSM}	Gate Trigger Voltage (Volts)	Gate Trigger Current (mA)	Turn-Off Time (μ s)	Holding Current (mA)	t_{rr}
230	Deflection Circuit of TV	TO66	6b	700	8	90	2.0	50	1.8	100	—
231	Deflection Circuit of TV	TO66	6b	600	8	90	2.0	50	3.8	100	—
314	Power Regulating Switch	TO3	118	400	12.5	200	2.0	40	20 Typ	50	5

SILICON GATE CONTROLLED SWITCH

(GATE TURN OFF THYRISTOR)

T-25-01

NTE Type Number	Description and Application	Case Style	Diagram Number	Repetitive Peak Forward Off-State Voltage (Volts)	RMS On-State Current (Amps)	Surge Current (Amps)	Maximum Ratings			Typical Turn-Off Time (μ s)
							Gate Trigger Voltage (Volts)	Gate Trigger Current (mA)	Holding Current (mA)	
							V_{GT}	I_{GT}	I_{HOLD}	
5424	High Speed Switch, Power Supply Control Regulator	TO220	11e	400	4.7	55	3	20	135	4

DESCRIPTION:

The NTE5424 is an all-diffused silicon controlled rectifier (reverse-blocking triode thyristor) intended for high speed switching applications such as power inverters, switching regulators, and high current pulse applications. This device features fast turn-off, high dv/dt, and high di/dt characteristics and may be used at frequencies up to 25kHz.

Features:

- Fast turn-off time (t_q) = 6 μ s Max.
- High di/dt and dv/dt capabilities
- Shorted-emitter gate-cathode construction (contains an internally diffused resistor between the gate and cathode)
- Low thermal resistance
- Center-gate construction (provides rapid uniform gate-current spreading for faster turn-on with substantially reduced heating effects)

SILICON CONTROLLED RECTIFIERS (SCR)

(FOR TV HORIZONTAL DEFLECTION)

NTE Type Number	Case Style	Diagram Number	Repetitive Peak Forward Off-State Voltage (Volts)	RMS On-State Current (Amps)	Surge Current (Amps)	Maximum Ratings				Typical Turn-Off Time (μ s)	Rate of Rise Voltage (V/ μ s)
						On-State Voltage (Volts)	Gate Trigger Current (mA)	Gate Trigger Voltage (Volts)	Holding Current (mA)		
						V_T	I_{GT}	V_{GT}	I_{HOLD}		
230	TO66	6b	700	8	90	2.16	50	2	100	1.8	400
231	TO66	6b	600	8	90	2.16	50	2	100	—	400

SILICON CONTROLLED RECTIFIERS (SCR)**(TV POWER SUPPLY SWITCHING)**

T-25-01

NTE Type No.	Description and Application	Case Style	Diag. No.	Repetitive Peak Forward Off-State Voltage (Volts)	Maximum Ratings					Typical Turn-On Delay Time (mS)	Typical Turn-On Rise Time (mS)	Typical Holding Current (mA)
					On-State Anode Current (Amps)	Surge On-State Current (Amps)	On-State Voltage (Volts)	Gate Trigger Voltage (Volts)	Gate Trigger Current (mA)			
				V _{ORM}	I _T	I _{TSM}	V _T	V _{GT}	I _{GT}	t _d	t _r	I _{HOLD}
276	SCR, Gate Turn Off TV Application	Japanese TO66	119	1250	5	80	5.3	1.5	120	0.2	1.3	300

INTEGRATED THYRISTOR/RECTIFIER (ITR)

NTE Type No.	Description and Application	Case Style	Diag. No.	Maximum Ratings					Typical Turn-Off Time (μs)	Typical Holding Current (mA)
				RMS On-State Current (Amps)	Surge Current (Amps)	Repetitive Peak Forward Off-State Voltage (Volts)	Gate Turn-Off Current (mA)	Gate Turn-Off Voltage (Volts)		
				I _T RMS	I _{TSM}	V _{ORM}	I _{GT}	V _{GT}		
308	TV Horizontal Deflection and Commutating Switch	TO66	6b	8	80	800	50	2	5.1	50
308P	TV Horizontal Deflection and Commutating Switch	TO220	11c	8	80	700	45	4	4.2	—
310	TV Horizontal Deflection and Trace Switch	TO66	6b	8	80	800	50	2	2.9	—
310P	TV Horizontal Deflection and Trace Switch	TO220	11c	8	80	750	40	4	2.4	—

DESCRIPTION:

The NTE308 and NTE310 series integrated thyristor/rectifiers are all-diffused power monolithic circuits that incorporate a silicon controlled rectifier and a silicon rectifier on a common pellet. The NTE308 series types are used as bipolar switches to control horizontal yoke current during the beam trace interval; the NTE310 series types are used as commutating switches to initiate trace-retrace switching.

TRIACS**(LISTED IN ORDER OF I_T RMS)****T-25-01**

V_{RRM} DC or Pk Volts	I_T RMS Maximum Forward Current								
	0.8A	2.5A		4A		8A		10A	
25				NTE5600					
50				NTE5601					NTE5661
100		NTE5640	NTE5650	NTE5602					
200	NTE5655	NTE5641	NTE5651	NTE5603					
300				NTE5604					
400	NTE5656	NTE5642	NTE5652	NTE5605	NTE5629	NTE5608	NTE5638		
500				NTE5606					
600	NTE5657	NTE5643	NTE5653	NTE5607		NTE5609			
800						NTE5610		NTE5620	
1000									
I_{GT} (mA)*	5 Max	25/40 Max	3 Max	30 Max	3 Max	10 Max	10 Max	50/75 Max	30/40 Max
V_{GT} (V)	2 Max	2.2 Max	2.2 Max	2.5 Max	2 Max	2.5 Max	2 Max	2 Max	2 Max
V_{FON} (V)	1.5 Max	1.8 Max	2.2 Max	2 Max	1.6 Max	1.5 Max	1.6 Max	2 Max	1.8 Max
I_{Surge} (A)	8 Max	25 Max	25 Max	30 Max	40 Max	80 Max	80 Max	100 Max	100 Max
I_{Hold} (mA)	20 Max	35 Max	5 Max	30 Max	5 Max	15 Max	15 Max	50 Max	30 Max
Firing Quads	All	All	All	I, II	All	All	All	All	All
Diag. No.	9n	25b	25b	7b	10g	11j	11k	491	110a
Package	TO92	TO5	TO5	TO126	TO202	TO220	TO220 Isolated	TO220 Full Pack	TO64**

* I_{GT} (max) is the worst case current required to guarantee turn-on of the device.

** Mounting Torque, in•lb (m•N): TO48 – 30 (3.33); TO64 – 20 (2.22)

V_{RRM} DC or Pk Volts	I_T RMS Maximum Forward Current									
	10A				15A		20A	25A		
25	NTE5611	NTE5621						NTE5680		
50	NTE5612	NTE5622	NTE5631					NTE5681		
100	NTE5613	NTE5623	NTE5632					NTE5682		
200	NTE5614		NTE5633		NTE5673	NTE56004		NTE5683	NTE56019	NTE56015
300	NTE5615		NTE5634					NTE5684		
400			NTE5635		NTE5675	NTE56006		NTE5685	NTE56020	NTE56016
500	NTE5617	NTE5627	NTE5636		NTE5676			NTE5686		
600	NTE5618		NTE5637	NTE5645	NTE5677	NTE56008		NTE5687		NTE56017
800						NTE56010	NTE5671			NTE56018
1000										
I_{GT} (mA)*	50/75 Max	50 Max	50 Max	25/50 Max	50/80 Max	40/75 Max	50/75 Max	75/100 Max	50/75 Max	50/100 Max
V_{GT} (V)	2.5 Max	2 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max
V_{FON} (V)	1.8 Max	1.8 Max	1.65 Max	1.6 Max	2.2 Max	1.6 Max	1.7 Max	1.8 Max	1.8 Max	1.8 Max
I_{Surge} (A)	100 Max	100 Max	100 Max	110 Max	150 Max	150 Max	150 Max	250 Max	200 Max	180 Max
I_{Hold} (mA)	50 Max	50 Max	50 Max	50 Max	60 Max	40 Max	40 Max	80 Max	70 Max	50 Max
Firing Quads	All	I, II	I, II, III	All	All	All	All	All	All	All
Diag. No.	33c	33c	11j	11k	111a	11j	491	111a	11k	11j
Package	TO127	TO127	TO220	TO220 Isolated	TO48** 1/4-28 UNF-2A	TO220	TO220 Full Pack	TO48** 1/4-28 UNF-2A	TO220 Isolated	TO220

* I_{GT} (max) is the worst case current required to guarantee turn-on of the device.

** Mounting Torque, in•lb (m•N): TO48 – 30 (3.33); TO64 – 20 (2.22)

TRIACS**(LISTED IN ORDER OF I_T RMS)****T-25-01**

V_{RRM} DC or Pk Volts	I_T RMS Maximum Forward Current								
	25A			40A				45A	
25									
50									
100									
200					NTE5693	NTE56022		NTE5688	
300									
400		NTE56014			NTE5695	NTE56024		NTE5689	
500									
600			NTE5672		NTE5697	NTE56026	NTE5679	NTE5690	NTE56033
800	NTE5699			NTE56028					
1000									
I_{GT} (mA)*	50/75 Max	80/100 Max	80/100 Max	50/75 Max	50/80 Max	50/80 Max	100 Max	50/80 Max	50/100 Max
V_{GT} (V)	2.5 Max	2.5 Max	2.5 Max	2 Max	2.5 Max	2.5 Max	2.5 Max	2.5 Max	1.5 Max
V_{FON} (V)	1.85 Max	1.8 Max	1.8 Max	1.85 Max	2 Max	2 max	1.8 Max	2 Max	1.8 Max
I_{Surge} (A)	250 Max	250 Max	250 Max	350 Max	400 Max	300 Max	300 Max	400 Max	300 Max
I_{Hold} (mA)	50 Max	80 Max	80 Max	75 Max	60 Max	60 Max	100 Max	60 Max	80 Max
Firing Quads	All	All	All	All	All	All	I, II, III	All	All
Diag. No.	491	406	172	11j	111a	113b	178/382b***	397	55b
Package	TO220 Full Pack	TO3 Isolated Flange	TO3 Swedge	TO220	TO48** 1/4-28 UNF-2A	TO40 Isolated Flange	TO3 Square Pack	1/2" Press Fit	TO218

* I_{GT} (max) is the worst case current required to guarantee turn-on of the device.

** Mounting Torque, in•lb (m•N): TO48 - 30 (3.33); TO64 - 20 (2.22)

*** NTE5679 may be received in either package style depending on availability. Consult factory for current stock.

INTERNALLY TRIGGERED TRIACS

NTE Type Number	Case Style	Diagram Number	TRIAC Characteristics					Trigger TRIAC Characteristics			
			Repetitive Peak Blocking Voltage (Volts)	RMS On-State Current (Amps)	Holding Current (mA)	Peak One-Cycle Surge Current (Amps)	Peak On-State Voltage @ I _T (RMS) (Volts)	Breakover Voltage Forward & Reverse (Volts)		Breakover Voltage Symmetry (Volts)	Peak Breakover Current (μA)
			V _{DRM}	I _T (RMS)	I _{Hold}			V _(BO)		ΔV _(BO)	I _(BO)
5646	TO220 Isolated	11k	600	10	60 Max	120	1.6	MIN	MAX	3 Max	200
								30	40		

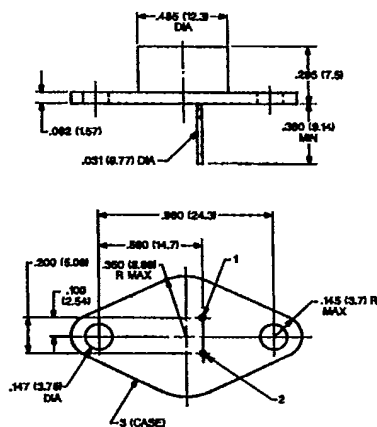
DESCRIPTION:

The NTE5646 is a TRIAC that includes a DIAC trigger mounted inside the same package. This device saves the user the expense and assembly time of buying a discrete DIAC and assembling in conjunction with a gated TRIAC. The NTE5646 is a bidirectional AC switch and is gate controlled for either polarity of main terminal voltage.

DIMENSIONAL OUTLINE DRAWINGS

T-25-01

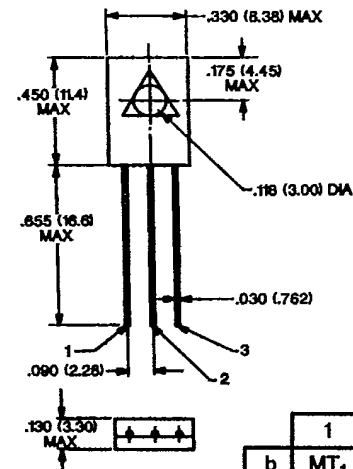
Diagram 6



TO66

	1	2	CASE
b	G	K	A

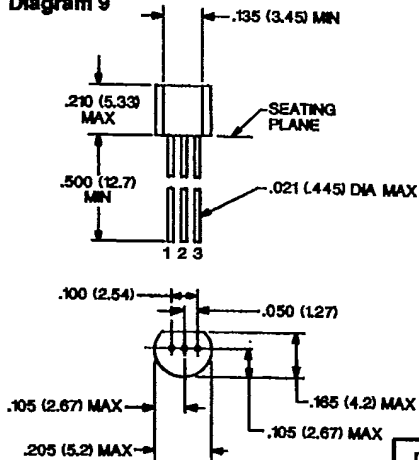
Diagram 7



TO126

	1	2	3
b	MT ₁	MT ₂	Gate
c	K	A	G

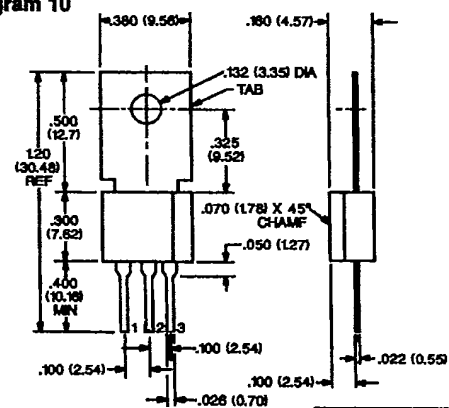
Diagram 9



TO92

	1	2	3
m	K	G	A
n	MT ₁	Gate	MT ₂

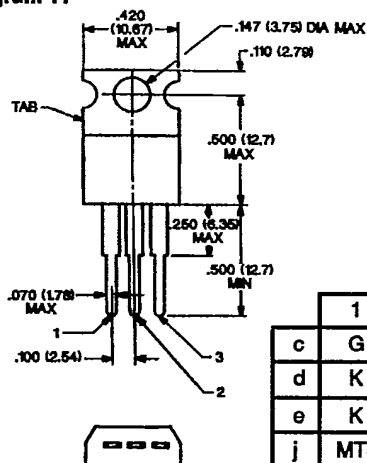
Diagram 10



TO202

	1	2	3	TAB
f	K	A	G	A
g	MT ₁	MT ₂	Gate	MT ₂

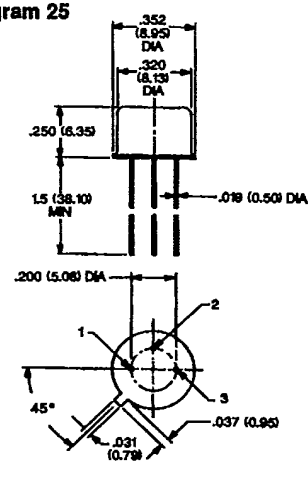
Diagram 11



TO220

	1	2	3	TAB
c	G	A	K	A
d	K	A	G	Isol
e	K	A	G	A
j	MT ₁	MT ₂	Gate	MT ₂
k	MT ₁	MT ₂	Gate	Isol

Diagram 25



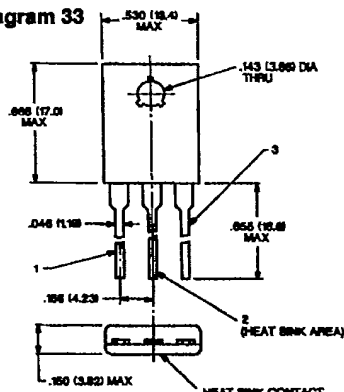
TO5

	1	2	3
b	MT ₁	Gate	MT ₂
c	K	G	A

DIMENSIONAL OUTLINE DRAWINGS

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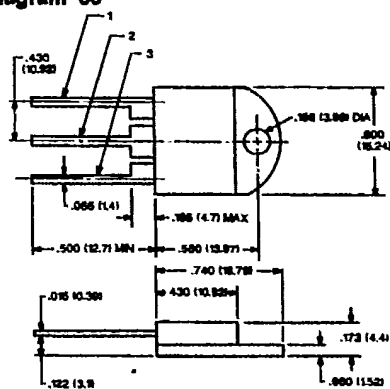
Diagram 33



TO127

	1	2	3
b	K	A	G
c	MT ₁	MT ₂	Gate

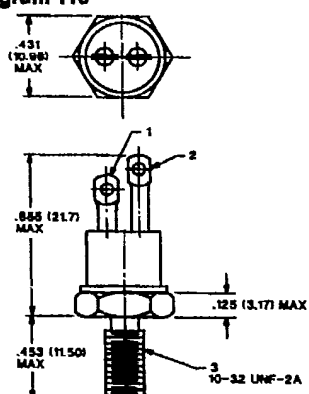
Diagram 55



TO218

	1	2	3
b	MT ₁	MT ₂	Gate
c	K	A	G

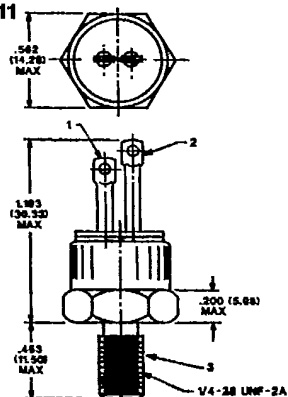
Diagram 110



TO64

	1	2	3
a	Gate	MT ₁	MT ₂
b	G	K	A

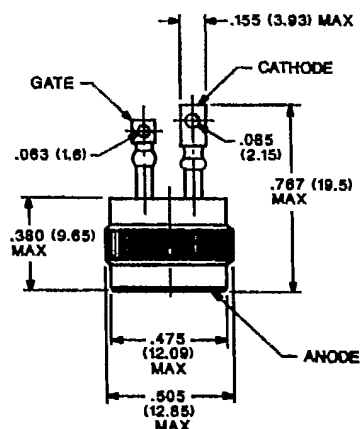
Diagram 111



TO48

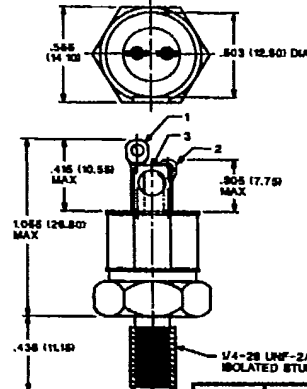
	1	2	3
a	Gate	MT ₁	MT ₂
b	G	K	A

Diagram 112



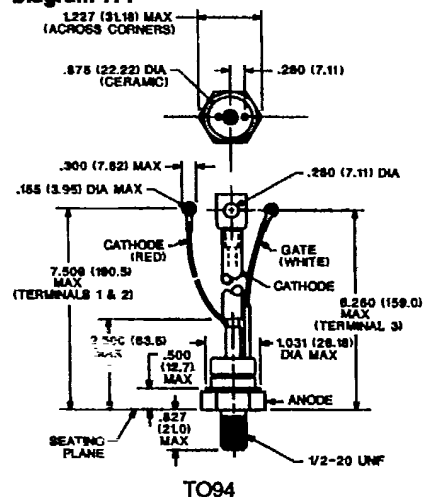
1/2" PRESS FIT

Diagram 113



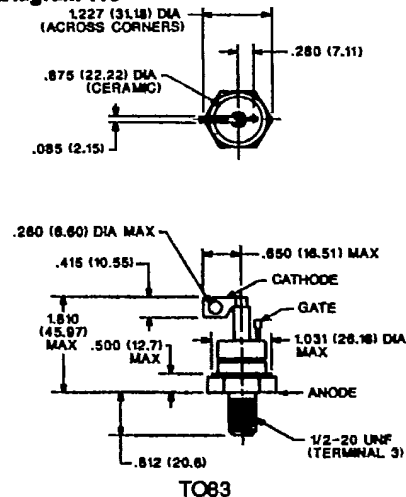
	1	2	3
a	K	G	A
b	MT ₁	Gate	MT ₂

Diagram 114



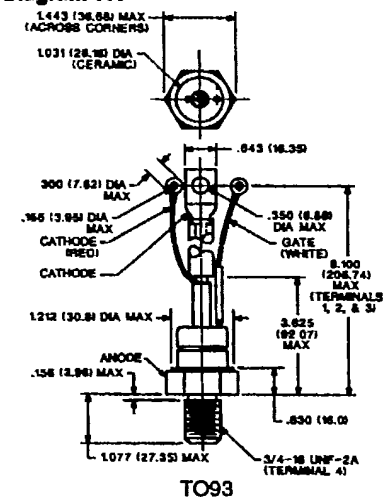
TO94

Diagram 115



TO83

Diagram 116



TO93

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TO65

TO3

Technical drawing of a probe tip assembly, showing dimensions in inches (in) and millimeters (mm).

Top View Dimensions:

- Overall width: 1.100 (27.94) MAX
- Overall height: 1.050 (41.91) MAX
- Inner diameter: .053 (1.34) DIA MAX THINNED COPPER LEADS
- Outer diameter: .161 (4.1) DIA MAX
- Pin diameter: .406 (10.31) DIA MAX PIN CIRCLE
- Pin spacing: 1.192 (30.27) MAX
- Pin diameter: 1.050 (26.67) MAX
- Gate diameter: .780 (19.81) MAX
- Gate position: .100 (2.54) MAX
- Gate position: .360 (9.14) MAX

Side View Dimensions:

- Overall height: 1.050 (41.91) MAX
- Inner diameter: .053 (1.34) DIA MAX THINNED COPPER LEADS
- Outer diameter: .161 (4.1) DIA MAX
- Pin diameter: .406 (10.31) DIA MAX PIN CIRCLE
- Pin spacing: 1.192 (30.27) MAX
- Pin diameter: 1.050 (26.67) MAX
- Gate diameter: .780 (19.81) MAX
- Gate position: .100 (2.54) MAX
- Gate position: .360 (9.14) MAX

Labels:

- MT₁
- MT₂
- GATE
- CARE TEMPERATURE MEASUREMENT POINT

Diagram of the Cathode Assembly (Fig. 1) showing dimensions in inches and millimeters:

- FOR NO. 6 SCREWS
- CATHODE POTENTIAL (RED)
- GATE (WHITE)
- CATHODE (RED)
- SEATING PLANE
- ANODE
- Dimensions (inches in parentheses, millimeters in brackets):
 - 1.750 (44.45) MAX
 - .172 (4.37) MAX
 - .755 (19.18) MAX
 - .440 (11.17) MIN
 - .360 (8.89) MAX
 - 10.000 (254.00) MAX
 - 4.000 (101.6) MIN
 - 1.490 (37.84) MAX
 - 3.100 (78.74) MAX
 - .810 (20.57) MAX
 - 1.040 (27.43) MAX

1. Complete threads to extend to within 2 1/2 threads of the sealing plane.
2. Pitch diameter of 3/4-16 UNF-2A coated threads (ASA B1.1-1960)

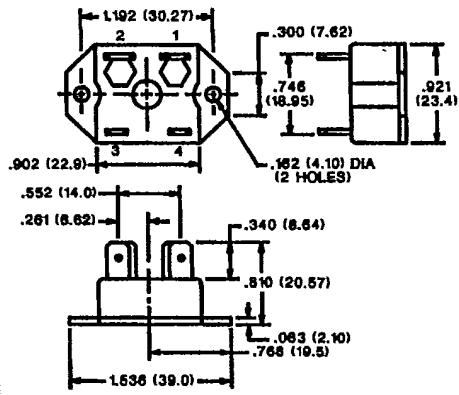
ALL DIMENSIONS ARE MAX

Technical drawing of the cathode assembly of a 6306 vacuum tube. The drawing shows a cross-section of the cathode and its electrical connections. Key dimensions include a cathode diameter of .145 (3.70) DIA MAX, a cathode length of 1.650 (41.91) MAX, and a cathode potential (red) of .755 (19.18) MAX. The drawing also shows the cathode potential (red) and the gate (white) dimensions.

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Diagram 382



	1	2	3	4
a	K	A	Gate	*
b	MT ₁	MT ₂	Gate	*

* Common w/Tab 1

Diagram 397

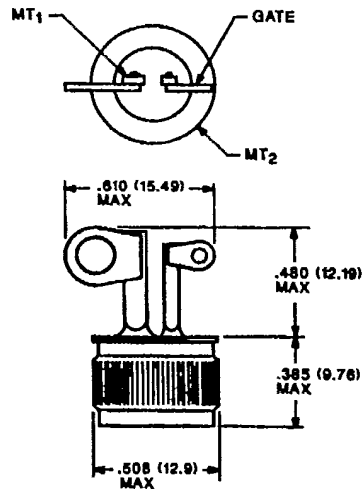


Diagram 404

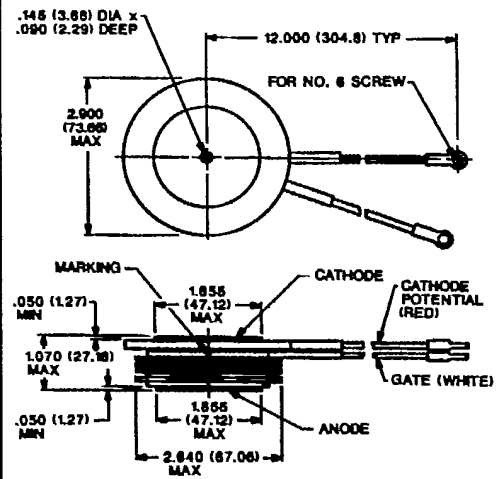
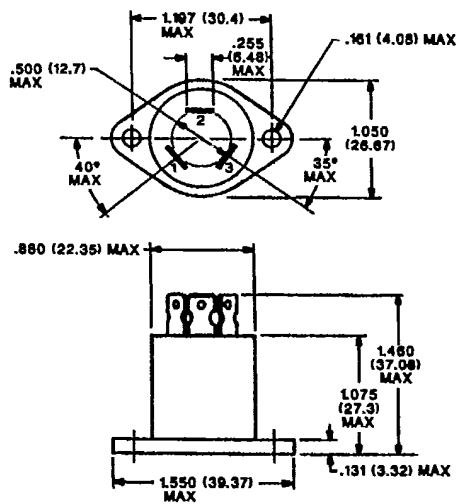
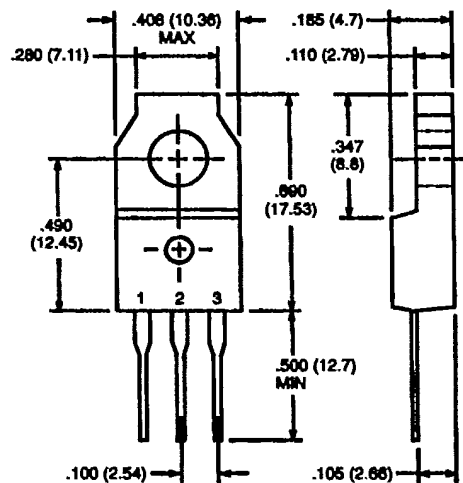


Diagram 406



Tab 1. MT₁
2. MT₂
3. Gate

Diagram 491



Pin 1. MT₁
2. MT₂
3. Gate