

SEMICONDUCTOR DICE ELECTRICAL CHARACTERISTICS

NPN HIGH VOLTAGE

T-29-23

Dice type	V _{CB0} Min	V _{CE0} Min	I _{CB0} Max at V _{CB}		h _{FE} at I _C V _{CE}				V _{CE(Sat)} at I _C		Max I _B	f _T Min	C ₀₈₀ Max	Chip geometry
	Volts	Volts	nA	Volts	Min	Max	mA	Volts	Volts	mA	mA	MHz	pF	
ZTX657	300	300	100	200	50	—	100	5	0.5	100	10	30	20	G13
MPSA42	300	300	100	200	40	—	30	10	0.5	20	2	50	6	G15
ZTX656	200	200	100	160	50	—	100	5	0.5	100	10	30	20	G13
MPSA43	200	200	100	160	50	200	30	10	0.4	20	2	50	6	G15
ZTX655	150	150	100	125	50	—	500	5	0.5	500	50	30	20	G14
ZTX455	160	140	100	140	100	300	150	10	0.7	150	15	100	15	G9
ZTX454	140	120	100	120	100	300	150	10	0.7	150	15	100	15	G9
ZTX654	125	125	100	100	50	—	500	5	0.5	500	50	30	20	G14
ZTX342	120	120	500	100	30	—	2	1	0.5	2	0.1	80	10	G16
ZTX341	100	100	500	80	30	—	2	1	0.5	2	0.1	80	10	G16

PNP HIGH VOLTAGE

Dice type	V _{CB0} Min	V _{CE0} Min	I _{CB0} Max at V _{CB}		h _{FE} at I _C V _{CE}				V _{CE(Sat)} at I _C		Max I _B	f _T Min	C ₀₈₀ Max	Chip geometry
	Volts	Volts	nA	Volts	Min	Max	mA	Volts	Volts	mA	mA	MHz	pF	
ZTX757	300	300	100	200	50	—	100	5	0.5	100	10	30	20	G14
ZTX557	300	300	100	200	50	300	50	10	0.3	50	5	75	10	G17
MPSA92	300	300	250	200	25	—	30	10	0.5	20	2	50	6	G18
ZTX756	200	200	100	160	50	—	100	5	0.5	100	10	30	20	G14
ZTX556	200	200	100	160	50	300	50	10	0.3	50	5	75	10	G17
MPSA93	200	200	250	160	30	150	30	10	0.4	20	2	50	8	G18
ZTX555	160	150	100	140	50	300	300	10	0.3	100	10	100	10	G17
ZTX755	150	150	100	125	50	—	500	5	0.5	500	50	30	20	G14
ZTX554	140	125	100	120	50	300	300	10	0.3	100	10	100	10	G17
ZTX754	125	125	100	100	50	—	500	5	0.5	500	50	30	20	G14
ZTX542	120	120	500	100	30	—	2	1	0.5	2	0.1	80	10	G2
ZTX541	100	100	500	80	30	—	2	1	0.5	2	0.1	80	10	G2

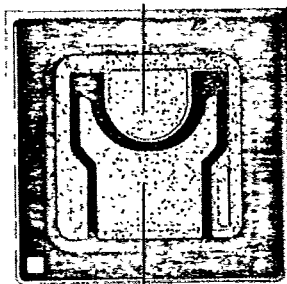
NPN DARLINGTON

Dice type	V _{CB0} Min	V _{CE0} Min	I _{CB0} Max at V _{CB}		h _{FE} at I _C V _{CE}				V _{CE(Sat)} at I _C		Max I _B	f _T Min	C ₀₈₀ Max	Chip geometry
	Volts	Volts	nA	Volts	Min	Max	mA	Volts	Volts	mA	mA	MHz	pF	
ZTX601	180	160	100	160	2k	100k	500	10	1.1	500	5.0	150	15	G19
ZTX600	160	140	100	140	2k	100k	500	10	1.1	500	5.0	150	15	G19
ZTX605	140	120	100	120	2k	100k	1000	5	1.5	1000	1.0	150	—	G19
ZTX604	120	100	100	100	2k	100k	1000	5	1.5	1000	1.0	150	—	G19
ZTX603	100	80	100	80	2k	100k	1000	5	1.0	1000	1.0	150	—	G19
ZTX602	80	60	100	60	2k	100k	1000	5	1.0	1000	1.0	150	—	G19
BCX38A	80	60	100	60	1k	—	500	5	1.25	800	8.0	—	—	G20
BCX38B	80	60	100	60	4k	—	500	5	1.25	800	8.0	—	—	G20
BCX38C	80	60	100	60	10k	—	500	5	1.25	800	8.0	—	—	G20
MPSA14	30†	30	100	30	20k	—	100	5	1.5	100	0.1	—	—	G20
MPSA13	30†	30	100	30	10k	—	100	5	1.5	100	0.1	—	—	G20
MPSA12	20†	—	100	15	20k	—	10	5	1.0	10	0.01	—	—	G20

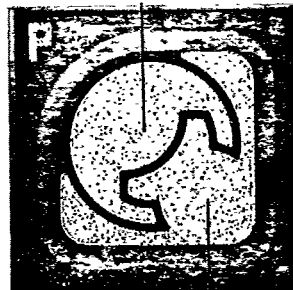
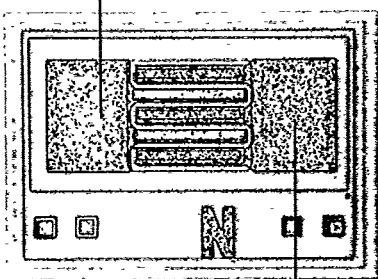
† V_{CES}

T-91-20

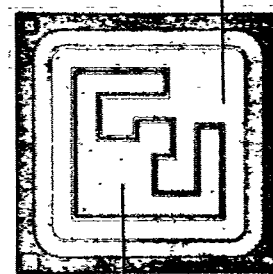
DISCRETE DICE GEOMETRIES

Base 0.004" $\varnothing$ 

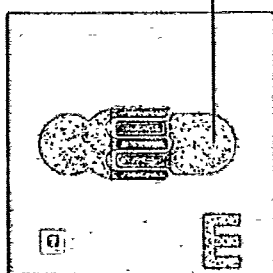
Emitter 0.004" sq.

G1 0.015" $\times$ 0.015" (0.38mm $\times$ 0.38mm)Emitter 0.004" $\varnothing$ Base 0.004" $\varnothing$ 0.017" $\times$ 0.017" (0.43mm $\times$ 0.43mm) G2Base 0.003" $\times$ 0.005"Emitter 0.003" $\times$ 0.005"G3 0.014" $\times$ 0.019" (0.36mm $\times$ 0.48mm)

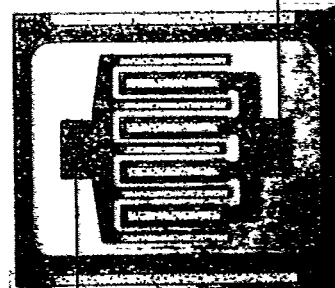
Base 0.004" sq.



Emitter 0.004" sq.

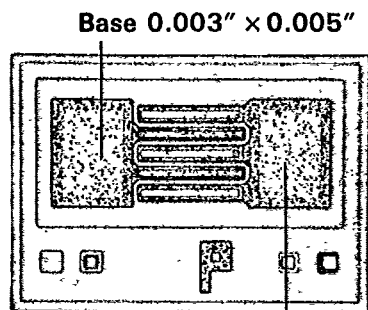
0.019" $\times$ 0.019" (0.48mm $\times$ 0.48mm) G4Emitter 0.003" $\varnothing$ Base 0.003" $\varnothing$ G5 0.016" $\times$ 0.016" (0.41mm $\times$ 0.41mm)

Emitter 0.003" sq.



Base 0.003" sq.

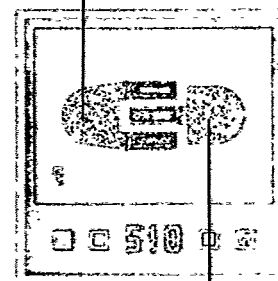
0.025" $\times$ 0.025" (0.63mm $\times$ 0.63mm) G6



Emitter 0.003" x 0.005"

G7 0.014" x 0.019" (0.36mm x 0.48mm)

Emitter 0.0025" Ø

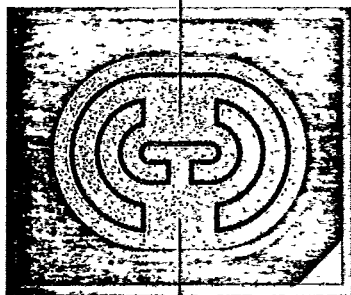


Base 0.0025" Ø

0.014" x 0.014" (0.36mm x 0.36mm)

G8

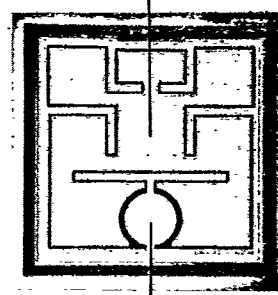
Emitter 0.0045"



Base 0.0045"

G9 0.026" x 0.031" (0.66mm x 0.79mm)

Emitter 0.008" sq.

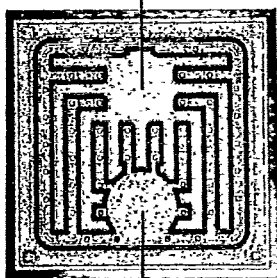


Base 0.007" Ø

0.041" x 0.041" (1.04mm x 1.04mm)

G10

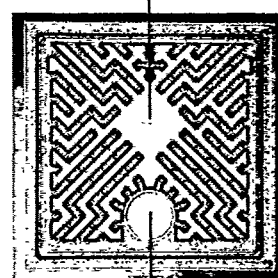
Emitter 0.005" sq.



Base 0.005" Ø

G11 0.025" x 0.025" (0.63mm x 0.63mm)

Emitter 0.008" sq.

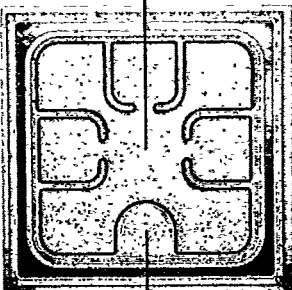


Base 0.007" Ø

0.041" x 0.041" (1.04mm x 1.04mm)

G12

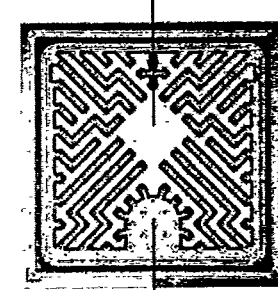
Emitter 0.0085" sq.



Base 0.006" Ø

G13 0.041" x 0.041" (1.04mm x 1.04mm)

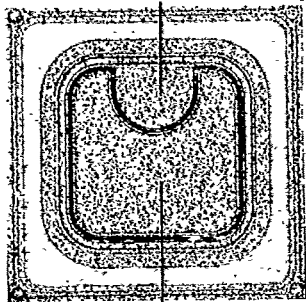
Emitter 0.008" sq.



Base 0.007" Ø

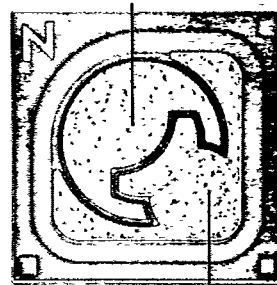
0.041" x 0.041" (1.04mm x 1.04mm)

G14

Base 0.004" sq. $\emptyset$ 

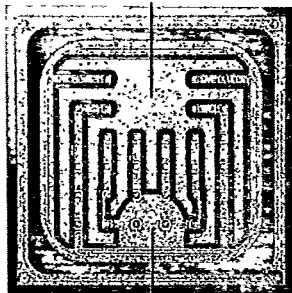
Emitter 0.005" sq.

G15 0.026" x 0.026" (0.66mm x 0.66mm)

Emitter 0.004" $\emptyset$ Base 0.004" $\emptyset$

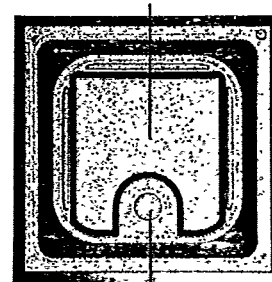
0.017" x 0.017" (0.43mm x 0.43mm) G16

Emitter 0.005" sq.

Base 0.0045" $\emptyset$

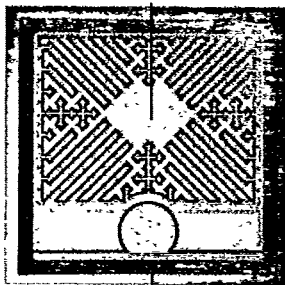
G17 0.027" x 0.027" (0.69mm x 0.69mm)

Emitter 0.006" x 0.009"

Base 0.004" $\emptyset$

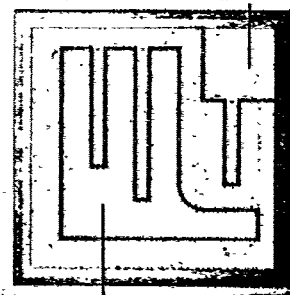
0.024" x 0.024" (0.61mm x 0.61mm) G18

Emitter 0.0085" sq.

Base 0.006" $\emptyset$

G19 0.041" x 0.041" (1.04mm x 1.04mm)

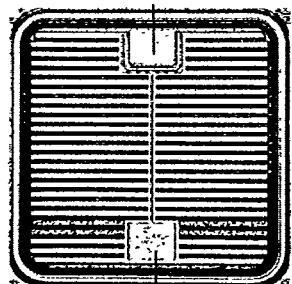
Base 0.006" sq.



Emitter 0.006" sq.

0.031" x 0.031" (0.79mm x 0.79mm) G20

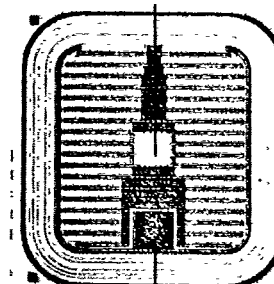
Source 0.005" sq.



Gate 0.005" sq.

G21 0.042" x 0.042" (1.07mm x 1.07mm)

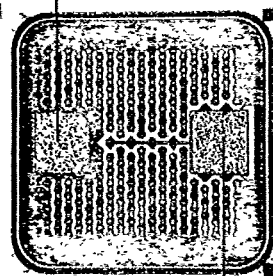
Source 0.005" sq.



Gate 0.005" sq.

0.041" x 0.043" (1.04mm x 1.09mm) G22

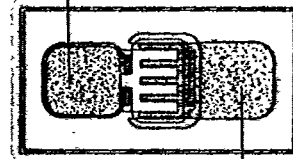
Source 0.005" sq.



Gate 0.005" sq.

G23 0.030" x 0.030" (0.76mm x 0.76mm)

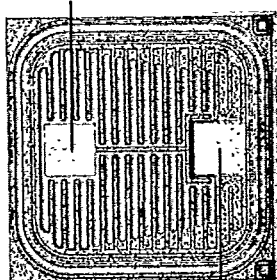
Gate 0.004" x 0.005"



Source 0.004" x 0.005"

0.023" x 0.023" (0.58mm x 0.58mm) G24

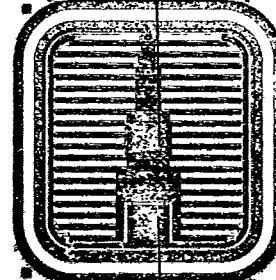
Gate 0.005" sq.



Source 0.005" sq.

G25 0.030" x 0.030" (0.76mm x 0.76mm)

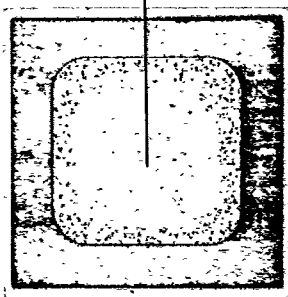
Source 0.005" sq.



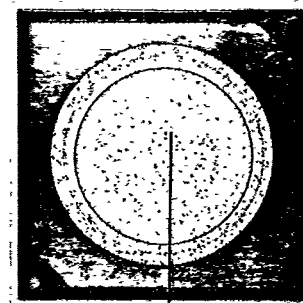
Gate 0.005" sq.

0.041" x 0.043" (1.04mm x 1.09mm) G26

0.011" sq. Anode

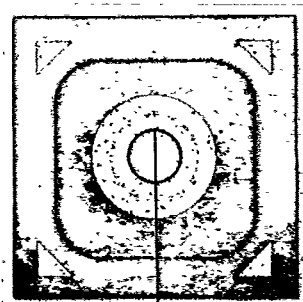


G27 0.019" x 0.019" (0.48mm x 0.48mm)



0.009" Ø Anode

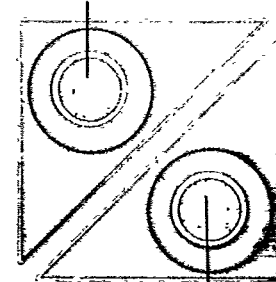
0.016" x 0.016" (0.41mm x 0.41mm) G28



0.004" Ø Anode

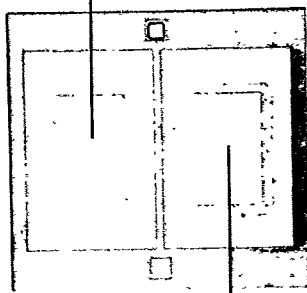
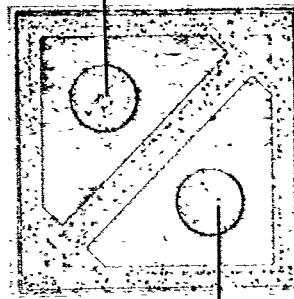
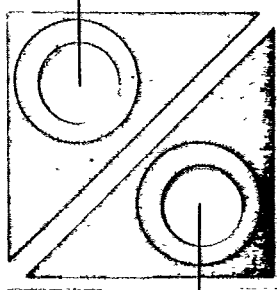
G29 0.016" x 0.016" (0.41mm x 0.41mm)

0.004" Ø Anode



0.004" Ø Anode

0.020" x 0.020" (0.51mm x 0.51mm) G30

0.004" x 0.006" Anode**0.004" x 0.006" Anode****G31** 0.016" x 0.016" (0.41mm x 0.41mm)**0.004" Ø Cathode****0.004" Ø Cathode**0.022" x 0.022" (0.56mm x 0.56mm) **G32*****0.004" Ø****0.004" Ø****G33** 0.016" x 0.016" (0.41mm x 0.41mm)