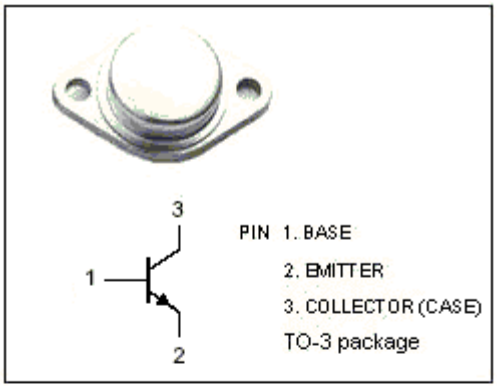
isc Silicon NPN Power Transistor MJ425

DESCRIPTION

- High Collector-Emitter Voltage-V_{CEX}= 700V
- DC Current Gain-h_{FE}=10(min)@ I_C=2.5A
- Low Collector-Emitter Saturation Voltage-$V_{CE(sat)}$=0.8Vdc(max)@I_C=1Adc

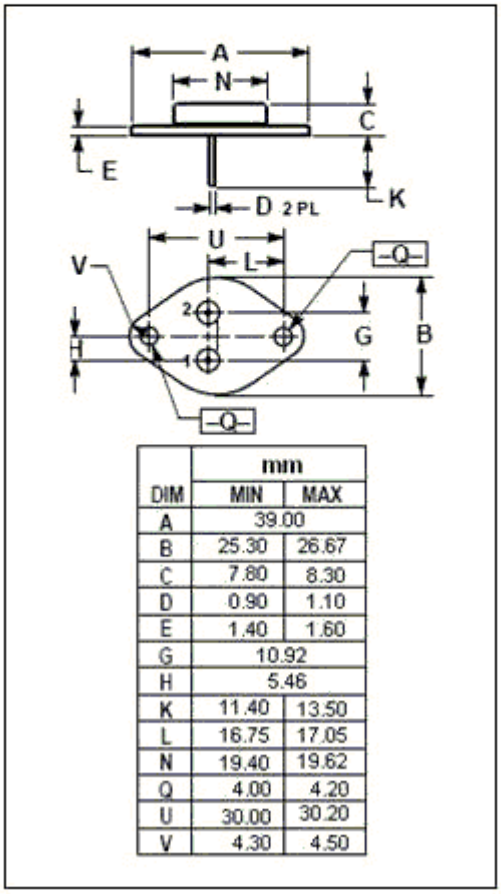


APPLICATIONS

- Designed for use in high voltage applications in deflection circuits, swithing regulators, inverters, and tine operated amplifiers.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation@T_C=25℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.75	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA; I_B= 0	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.1A			0.8	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 0.1A			1.2	V
I_{CEO}	Collector Cutoff Current	V_{CE}=400V; $V_{EB(off)}$=1.5V			0.25	mA
I_{CEX}	Collector Cutoff Current	V_{CE}=700V; $V_{EB(off)}$=1.5V			0.5	mA
I_{EBO}	Emitter Cutoff current	V_{EB}=6V; I_C= 0			5.0	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}=5V	30		90	
h_{FE-2}	DC Current Gain	I_C= 2.5A; V_{CE}=5V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 0.2A; V_{CE}=10V; f=1.0MHz	2.5			MHz