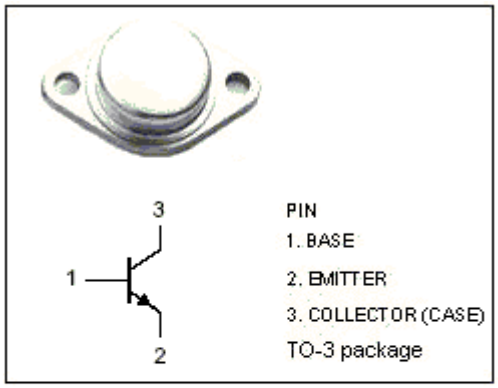
isc Silicon NPN Power Transistor 2N6277

DESCRIPTION

- High Switching Speed
- High DC Current Gain-
  : h_{FE}= 30-120@ I_C= 20A
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$=1.0V(Min.)@ I_C= 20A
- Complement to Type 2N6379

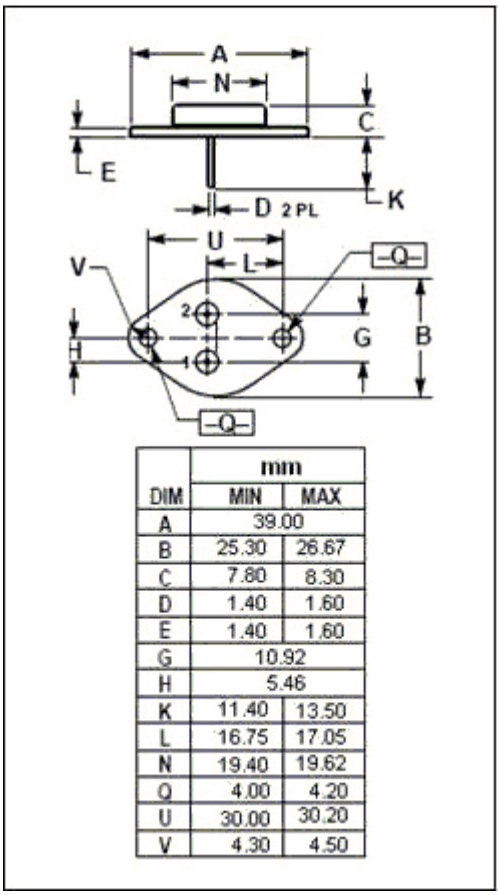


APPLICATIONS

- Designed for use in industrial-military power amplifier and switching circuit applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	50	A
I_{CM}	Collector Current-Peak	100	A
I_B	Base Current-Continuous	20	A
P_C	Collector Power Dissipation @T_C=25℃	250	W
T_J	Junction Temperature	200	℃
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	1.40	1.60
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	0.7	℃/W

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA; I_B= 0	150		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 2A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 50A; I_B= 10A		3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 20A; I_B= 2A		1.8	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 50A; I_B= 10A		3.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 20A; V_{CE}= 4V		1.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 75V; I_B= 0		50	μA
I_{CEX}	Collector Cutoff Current	V_{CE}= 180V; $V_{BE(off)}$=1.5V V_{CE}= 180V; $V_{BE(off)}$=1.5V; T_C=150℃		10 1.0	μA mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0		0.1	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 4V	50		
h_{FE-2}	DC Current Gain	I_C= 20A; V_{CE}= 4V	30	120	
h_{FE-3}	DC Current Gain	I_C= 50A; V_{CE}= 4V	10		
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 10V	30		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 0.1MHz		600	pF

Switching times

t_r	Rise Time	V_{CC}= 80V, I_C= 20A, I_{B1}= 2A, $V_{BE(off)}$= 5V		0.35	μs
t_s	Storage Time	V_{CC}= 80V, I_C= 20A, I_{B1}= -I_{B2}= 2A		0.80	μs
t_f	Fall Time			0.25	μs