

isc Silicon NPN Power Transistor

2SD1375

DESCRIPTION

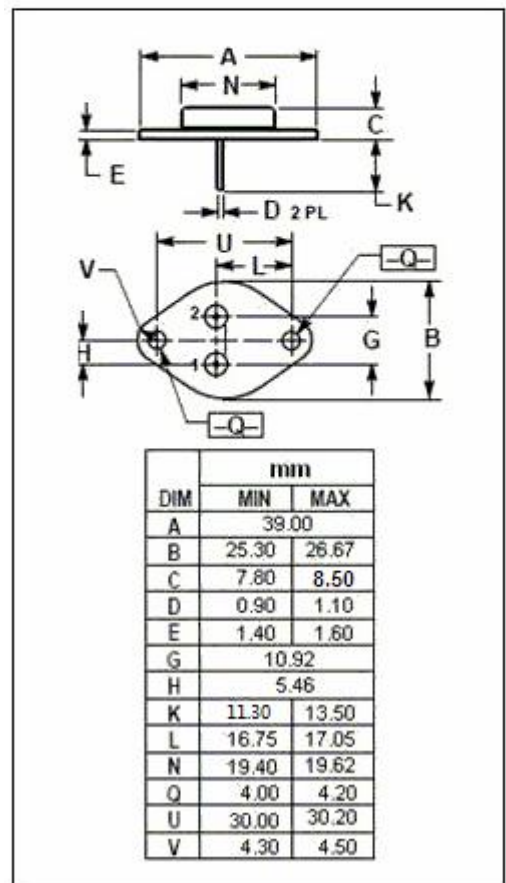
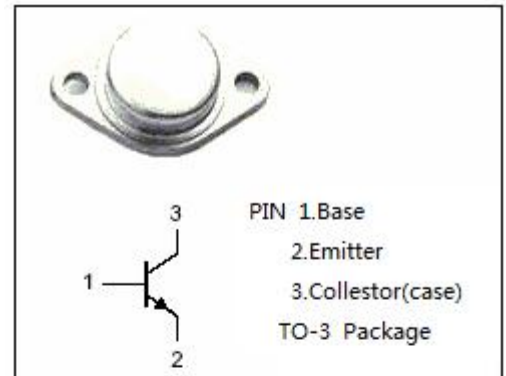
- High Collector-Base Voltage-
: $V_{CBO} = 300V(\text{Min.})$
- Good Linearity of h_{FE}
- High Speed Switching
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in high-voltage, high-speed, power switching regulators and general purpose applications.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	4.0	A
I_{CM}	Collector Current-Peak	6.0	A
I_B	Base Current	1.0	A
P_C	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	90	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1375****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA; I _B = 0	300			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.6A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 0.6A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 300V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			0.1	mA
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	30		150	
h _{FE-2}	DC Current Gain	I _C = 3A ; V _{CE} = 5V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V, f _{test} = 1MHz	5			MHz

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