

isc Silicon NPN Power Transistor

2SC1783

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
 $V_{CEO(SUS)} = 120V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

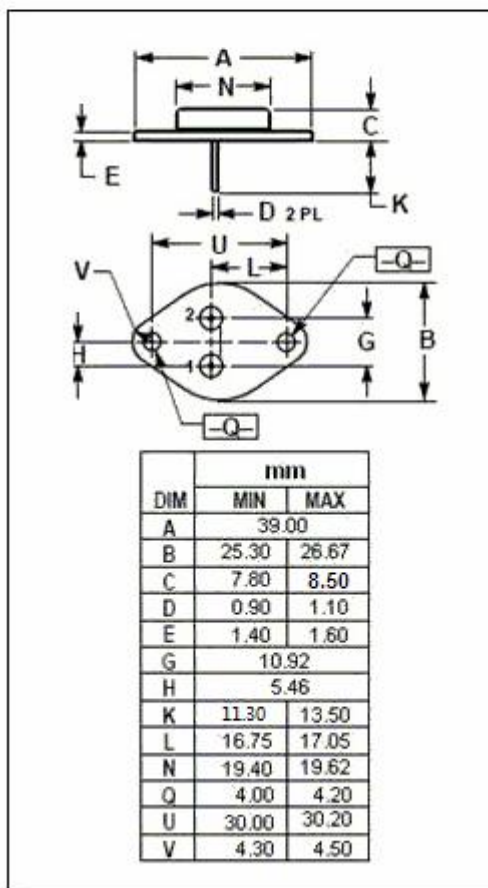
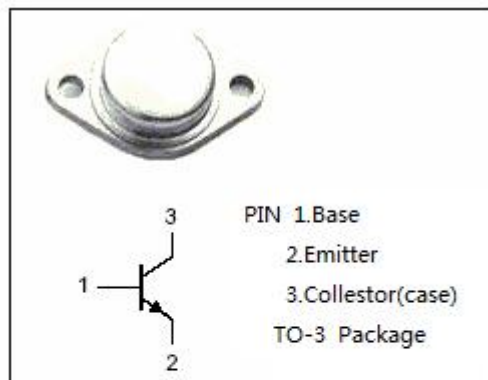
- Automotive ignition
- Switching regulator
- Motor control applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	100	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Rresistance, Junction to Case	1.25	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2SC1783****ELECTRICAL CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA ; I _B = 0	120			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 180V, I _E = 0			0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 120V, I _B = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			0.1	mA
h _{FE}	DC Current Gain	I _C =3A; V _{CE} = 4V	30			

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