

isc Silicon NPN Darlington Power Transistor
2SD1202
DESCRIPTION

- Low Collector Saturation Voltage
- High DC Current Gain
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

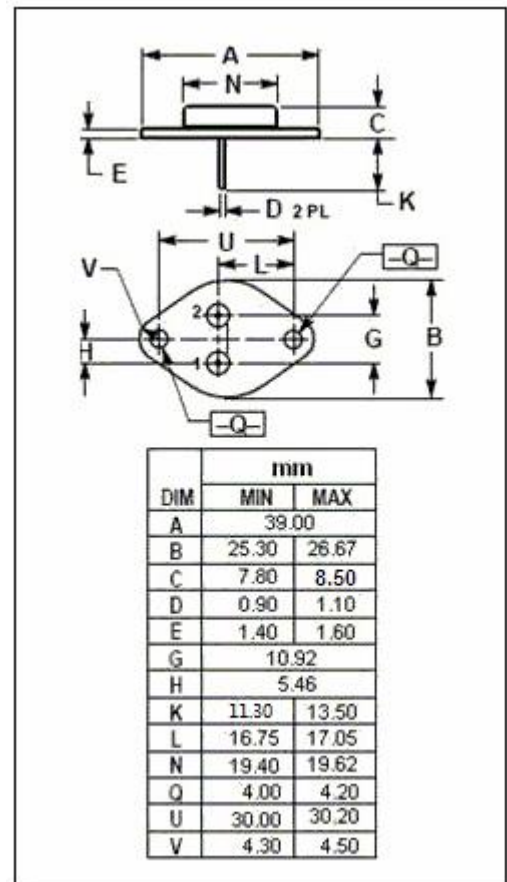
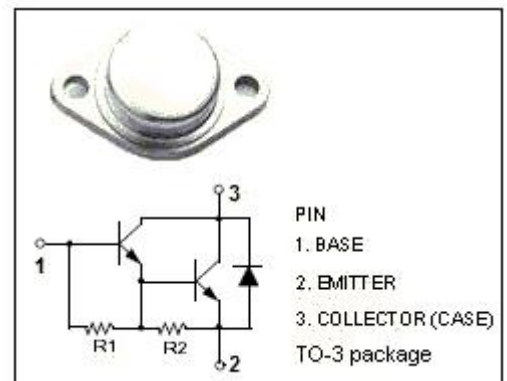
- High ruggedness electronic ignitions
- High voltage ignition coil driver
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	10	A
I_{CM}	Collector Current-peak	20	A
I_B	Base Current	1	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_{thj-c}	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C/W}$



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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 = 50mA; I _B = 0	400			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 70mA			1.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 8 A; I _B = 100mA			1.8	V
V _{BE(sat)}	Base-Emitter Saturation Voltage 	I _C = 8 A; I _B = 100mA			2.2	V
I _{CES}	Collector Cutoff Current	V _{CE} = 500V; V _{BE} = 0 V _{CE} = 500V; V _{BE} = 0; T _J = 125°C			1.0 5.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 400V; I _B = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			20	mA
h _{FE-1}	DC Current Gain	I _C = 5A; V _{CE} = 3V	750			
h _{FE-2}	DC Current Gain	I _C = 10A; V _{CE} = 3V	100			
V _{ECF}	C-E Diode Forward Voltage	I _F = 10A			2.8	V

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