

isc Silicon NPN Darlington Power Transistor

2SD1204

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

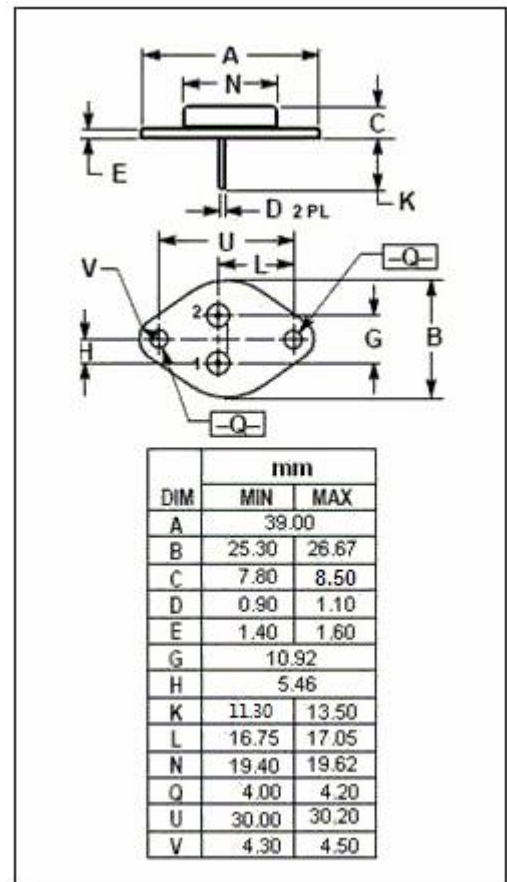
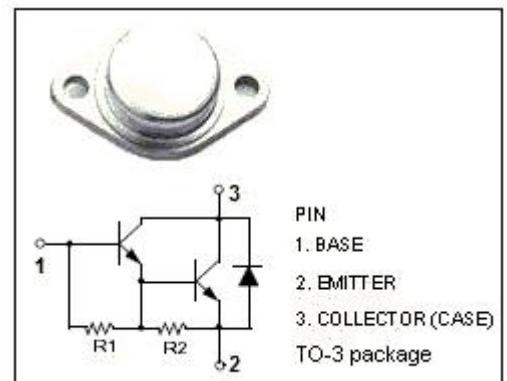
- High ruggedness electronic ignitions
- High voltage ignition coil driver
- General purpose power amplifiers

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	15	A
I_{CM}	Collector Current-peak	30	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	$^{\circ}\text{C/W}$



isc Silicon NPN Darlington Power Transistor**2SD1204****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 = 8 A; I _B = 100mA			1.6	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 10 A; I _B = 250mA			1.8	V
V _{CE(sat)} -3	Collector-Emitter Saturation Voltage	I _C = 12 A; I _B = 300mA			2.0	V
V _{BE(sat)} -1	Base-Emitter Saturation Voltage	I _C = 8 A; I _B = 100mA			2.2	V
V _{BE(sat)} -2	Base-Emitter Saturation Voltage	I _C = 10 A; I _B = 250mA			2.5	V
I _{CES}	Collector Cutoff Current	V _{CE} = 500V; V _{BE} = 0 V _{CE} = 500V; V _{BE} = 0; T _j = 125°C			0.1 0.5	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 400V; I _B = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; 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 = 15A ; V _{CE} = 3V	100			
V _{ECF}	C-E Diode Forward Voltage	I _F = 10A			2.5	V

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