

isc Silicon NPN Darlington Power Transistor

2SD628

DESCRIPTION

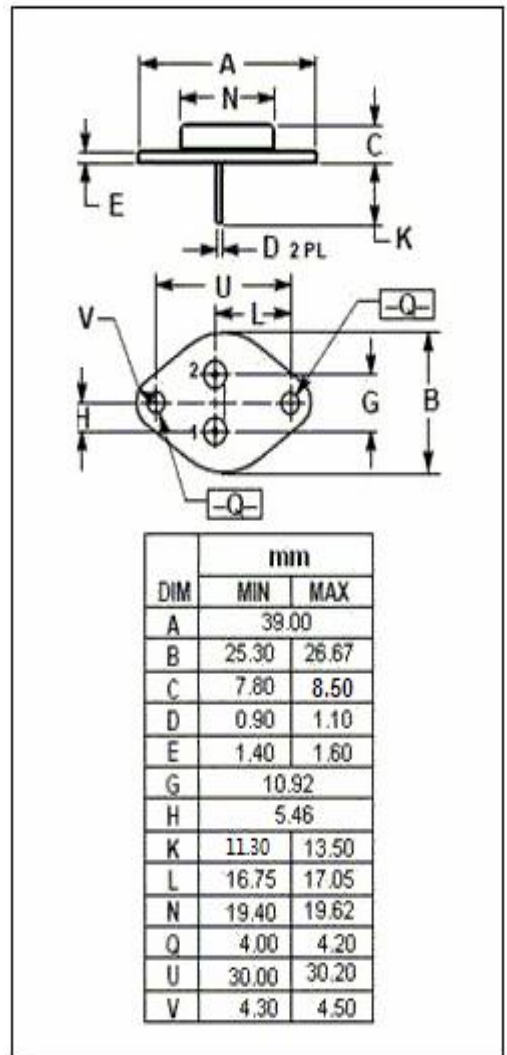
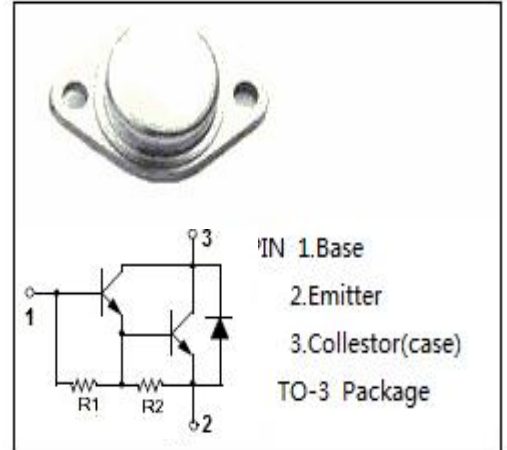
- Collector-Emitter Sustaining Voltage-
: $V_{CE(sus)} = 100V(\text{Min.})$
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min.})@I_C = 5A$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.0V(\text{Max.})@I_C = 5A$
- Complement to Type 2SB638
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier and high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	80	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~+150	$^\circ C$



isc Silicon NPN Darlington Power Transistor**2SD628****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; R _{BE} = ∞	100			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 5mA; I _C = 0	7			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 10mA			2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 100mA			3.0	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 10mA			2.0	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 10A; I _B = 100mA			3.5	V
I _{CB0}	Collector Cutoff Current	V _{CB} = 100V; I _E = 0			0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 80V; R _{BE} = ∞			1.0	μA
h _{FE}	DC Current Gain	I _C = 5A, V _{CE} = 3V	1000		20000	

Switching Times

t _{on}	Turn-on Time	I _C = 5A, I _{B1} = -I _{B2} = 10mA		2		μs
t _{off}	Fall Time			8		μs

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