

isc Silicon NPN Power Transistor

2SD640

DESCRIPTION

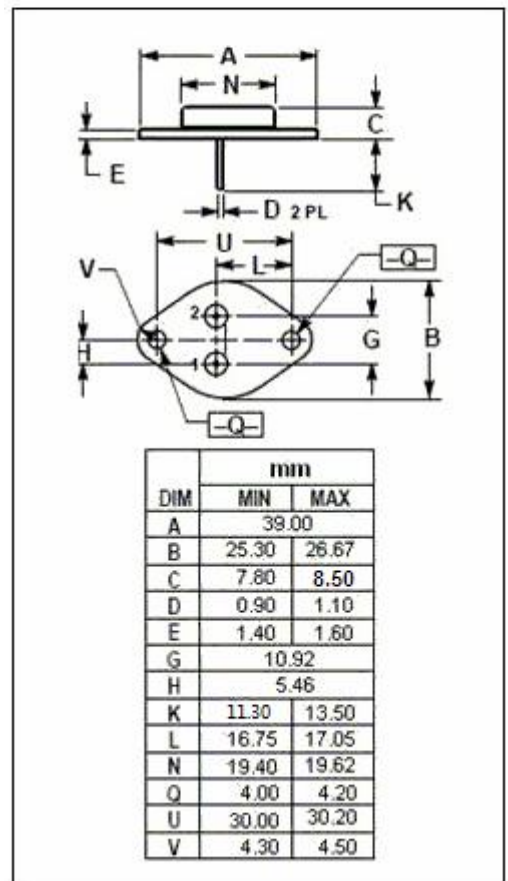
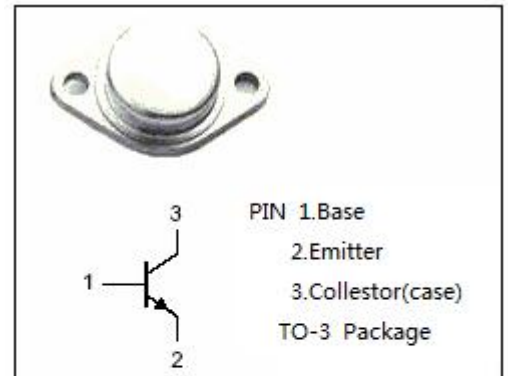
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 400V$ (Min)
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V$ (Max.) @ $I_C = 5A$
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High voltage switching applications.
- High power amplifier applications.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ C$	100	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



isc Silicon NPN Power Transistor**2SD640****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 500V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 5V	25		140	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 50V; f _{test} = 1.0MHz		70		pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		3		MHz

Switching Times

t _{on}	Turn-on Time	I _{B1} = -I _{B2} = 0.3A; V _{CC} = 200V		1.0		μ s
t _{stg}	Storage Time			3.0		μ s
t _f	Fall Time			0.6		μ s

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