

isc Silicon NPN Power Transistor
2SC2749
DESCRIPTION

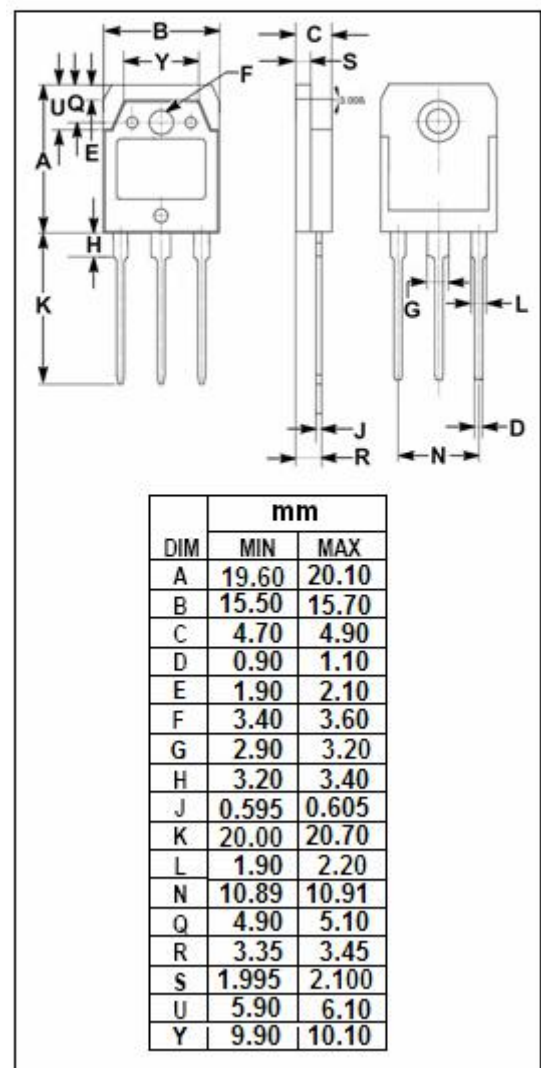
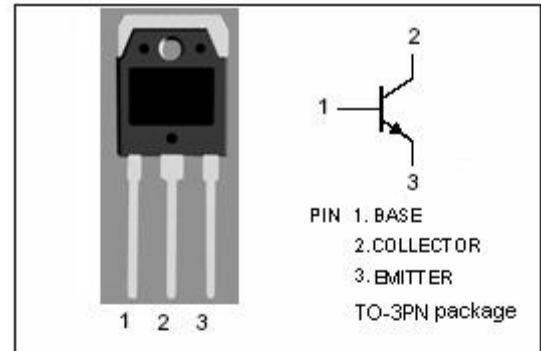
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min})$
- High Switching Speed
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High current switching industrial use
- 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-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5	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	$^\circ\text{C}$



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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 = 30mA ; I _B =0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 6A; I _B = 1.2A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 6A; I _B = 1.2A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 400V ; I _E =0			0.1	mA
I _{CEx}	Collector Cutoff Current	V _{CE} =400V; V _{BE(off)} =-1.5V V _{CE} =400V; V _{BE(off)} =-1.5V; T _C =125°C			0.1 1.0	mA
I _{CER}	Collector Cutoff Current	V _{CE} = 400V; R _{BE} = 50 Ω , T _C = 125°C			2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	15		80	
h _{FE-2}	DC Current Gain	I _C = 3A ; V _{CE} = 5V	10			
h _{FE-3}	DC Current Gain	I _C = 6A ; V _{CE} = 5V	7			

Switching times

t _{on}	Turn-on Time				1.0	μ s
t _{stg}	Storage Time	I _C = 6A , I _{B1} = -I _{B2} = 1.2A R _L = 25 Ω ; V _{CC} ≈ 150V			2.5	μ s
t _f	Fall Time				0.7	μ s

◆ h_{FE-1} Classifications

N	R	O	Y
15-30	20-40	30-60	40-80

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