

isc Silicon NPN Power Transistor
2SC5099
DESCRIPTION

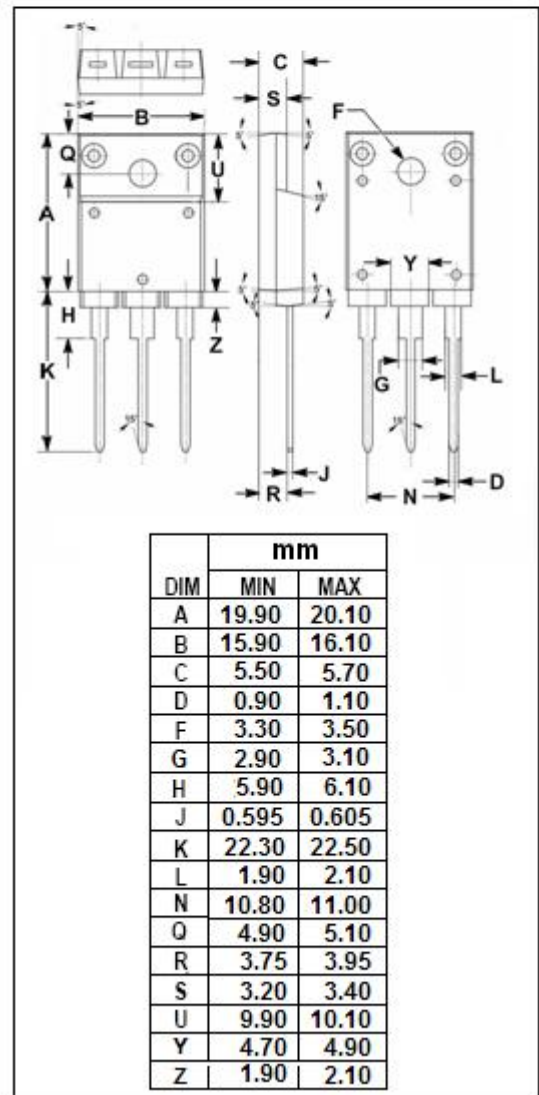
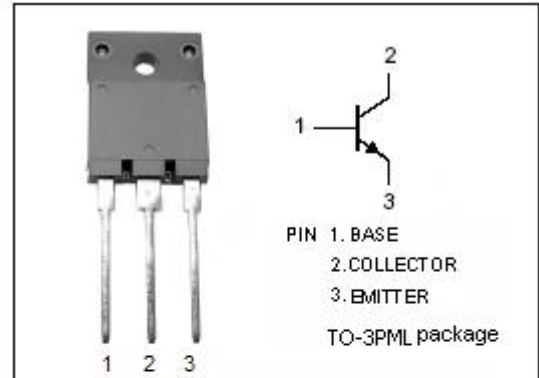
- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = 80V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1907
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	60	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 _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA; I _B = 0	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.2A			0.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 80V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			10	μ A
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 4V	50			
C _{OB}	Collector Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1MHz		110		pF
f _T	Current-Gain—Bandwidth Product	I _E = -0.5A; V _{CE} = 12V		20		MHz

Switching times

t _{on}	Turn-on Time	I _C = 3A, R _L = 10Ω, I _{B1} = -I _{B2} = 0.3A, V _{CC} = 30V		0.16		μ s
t _{stg}	Storage Time			2.60		μ s
t _f	Fall Time			0.34		μ s

◆ h_{FE} classifications

O	P	Y
50-100	70-140	90-180

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