

isc Silicon NPN Power Transistor
2SC3299
DESCRIPTION

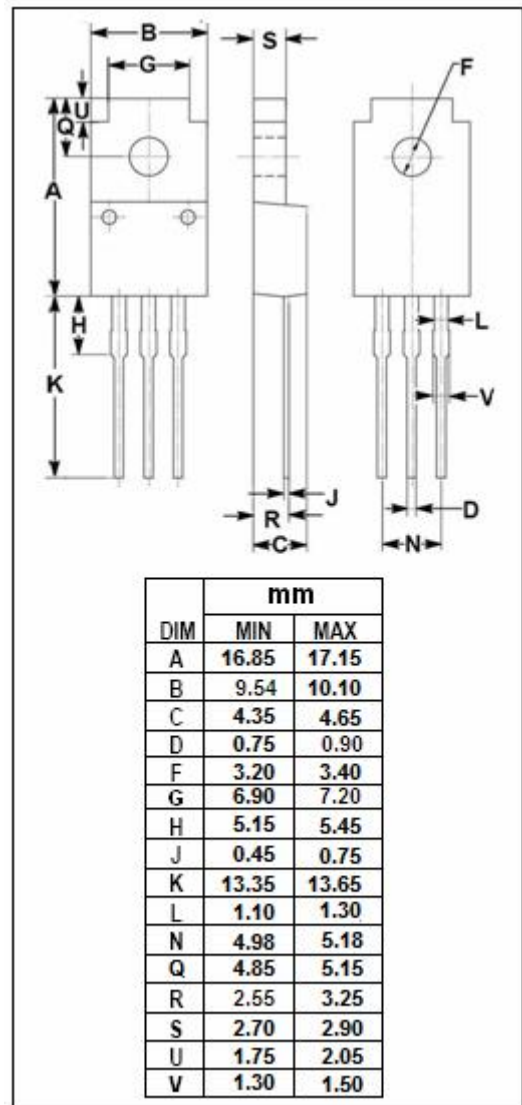
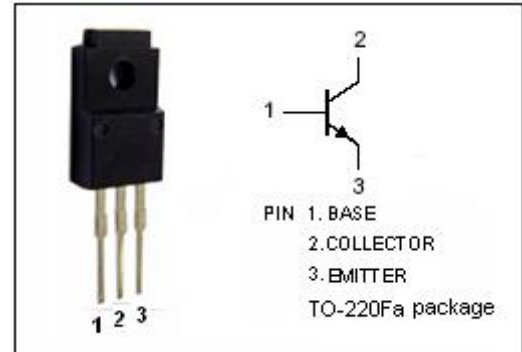
- Collector-Emitter Breakdown Voltage
: $V_{(BR)CEO} = 50V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1307
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	1	A
P_C	Total Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Total Power Dissipation @ $T_c = 25^\circ\text{C}$	20	
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 = 10mA; I _B = 0	50			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _c = 3A; I _B = 0.15A			0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _c = 3A; I _B = 0.15A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			1.0	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	μA
h _{FE-1}	DC Current Gain	I _c = 1A; V _{CE} = 1V	70		240	
h _{FE-2}	DC Current Gain	I _c = 3A; V _{CE} = 1V	30			
f _T	Current-Gain—Bandwidth Product	I _c = 1A; V _{CE} = 4V		120		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		80		pF

Switching times

t _{on}	Turn-on Time	I _{B1} = -I _{B2} = 0.15A; R _L = 10Ω; V _{CC} = 30V		0.1		μs
t _{stg}	Storage Time			1.0		μs
t _f	Fall Time			0.1		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

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