

isc Silicon NPN Power Transistors

2SC3549

DESCRIPTION

- High Voltage
- High Speed Switching
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

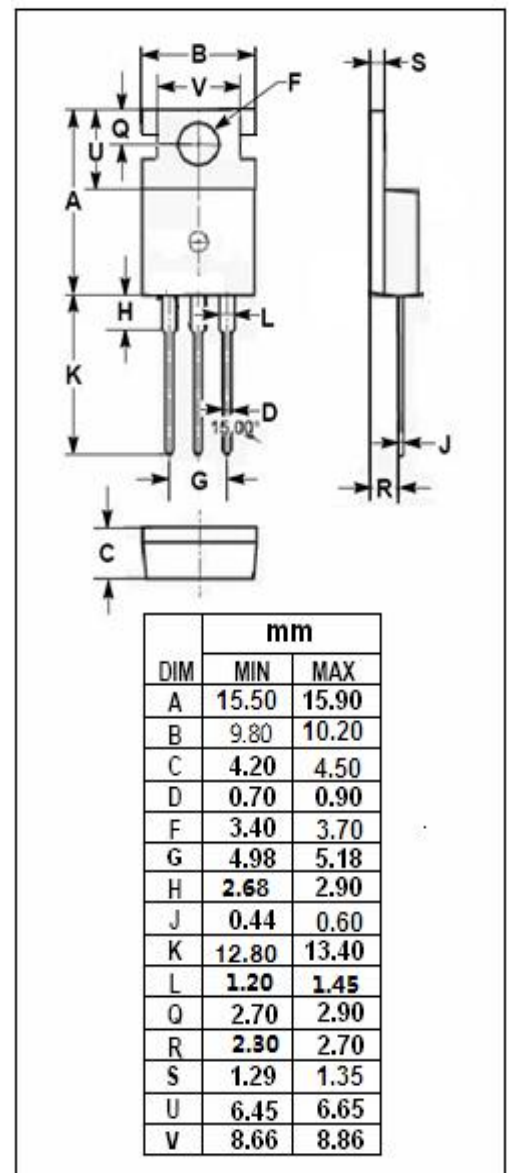
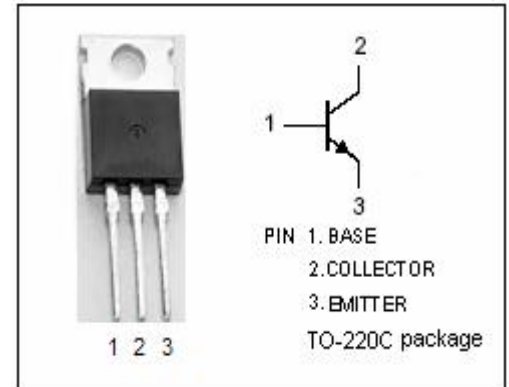
- Switching regulators
- DC-DC converter
- Solids state relay
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	40	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.16	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistors**2SC3549****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	800			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	900			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	10			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 900V; I _E = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 5V	10			

Switching times

t _{on}	Turn-on Time	I _C = 2A, I _{B1} = 0.4A; I _{B2} = -0.8A R _L =150 Ω; P _W = 20 μs; Duty ≤2%			1.0	μs
t _{stg}	Storage Time				4.0	μs
t _f	Fall Time				0.8	μs

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