

Silicon NPN Power Transistor

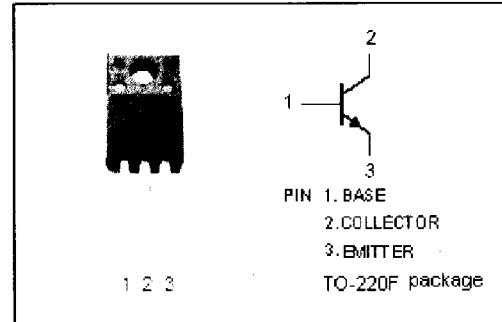
2SC5249

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = 600V(\text{Min})$
- High Switching Speed

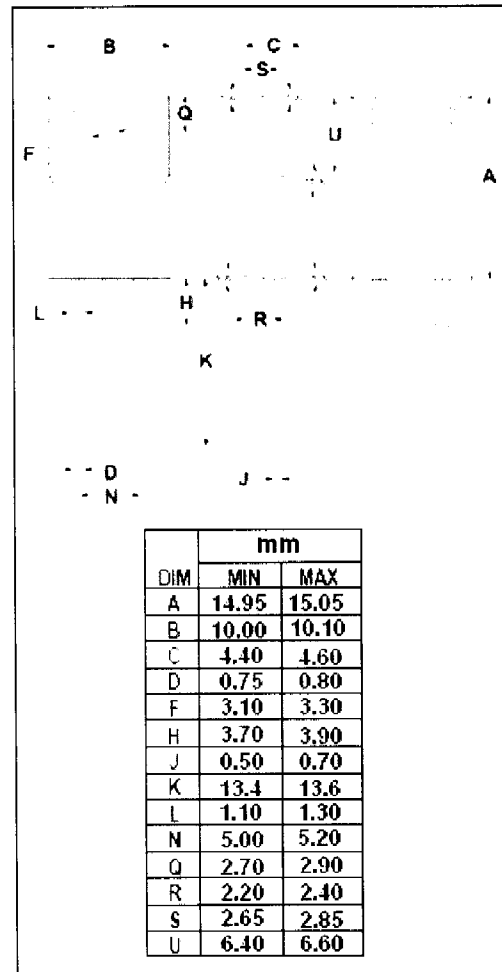
APPLICATIONS

- Designed for switching regulator and general purpose applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	35	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Silicon NPN Power Transistor

2SC5249

ELECTRICAL CHARACTERISTICS

T_j=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	600			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 600V; I _E = 0			100	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			100	μA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 4V	20		40	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1MHz		50		pF
f _T	Current-Gain—Bandwidth Product	I _E = -0.3A; V _{CE} = 12V		6		MHz

Switching Times

t _{on}	Turn-On Time	I _C = 1A; I _{B1} = -I _{B2} = 0.1A; V _{CC} = 200V; R _L = 200 Ω			1.0	μs
t _{stg}	Storage Time				19	μs
t _f	Fall Time				1.0	μs