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Silicon NPN Power Transistor

2SC5239

DESCRIPTION

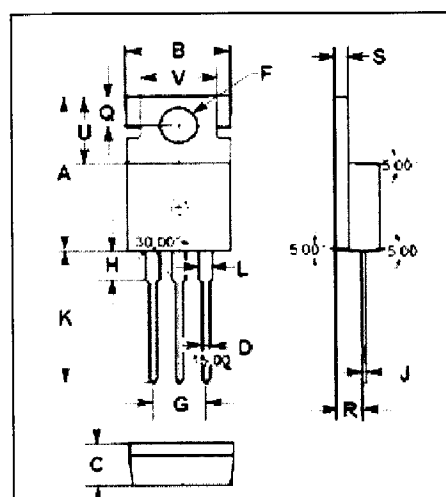
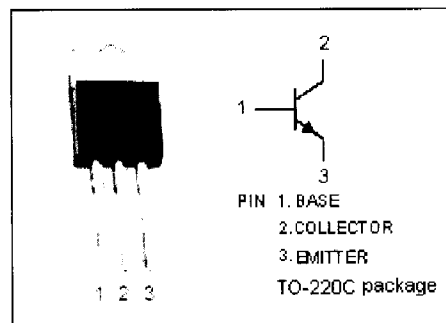
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 550V(\text{Min})$
- High Switching Speed

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	900	V
V_{CEO}	Collector-Emitter Voltage	550	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 @ $T_c=25^\circ\text{C}$	50	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

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Quality Semi-Conductors

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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	550			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} = 800V; 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	10		30	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1MHz		35		pF
f _T	Current-Gain—Bandwidth Product	I _E = -0.25A; V _{CE} = 12V		6		MHz

Switching Times

t _{on}	Turn-On Time	I _C = 1A; I _{B1} = 0.15A; I _{B2} = -0.45A; V _{CC} = 250V; R _L = 250 Ω			0.7	μs
t _{stg}	Storage Time				4.0	μs
t _f	Fall Time				0.5	μs