

isc Silicon NPN Power Transistor**2SC3752****DESCRIPTION**

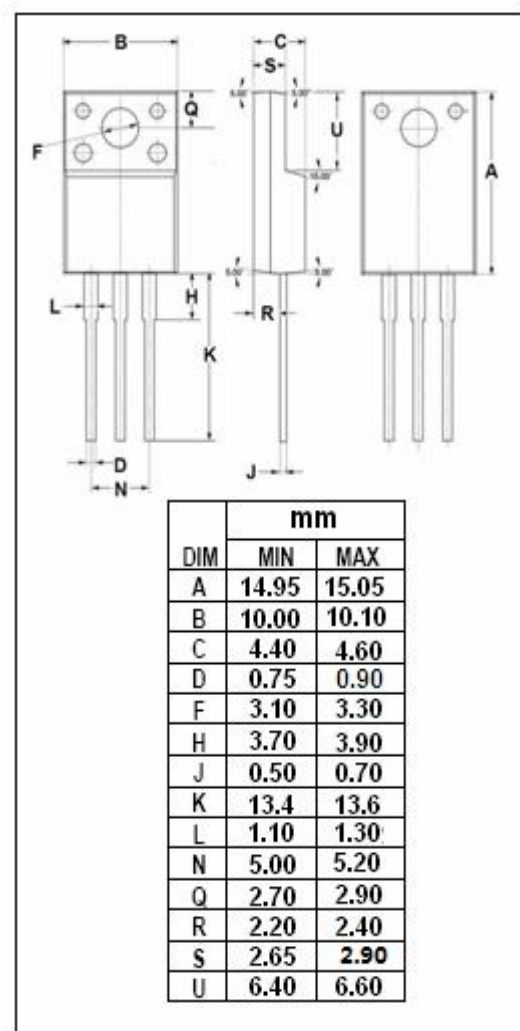
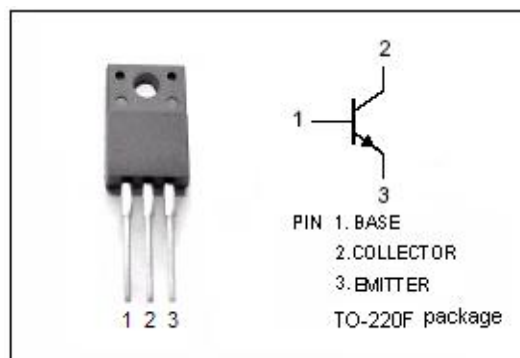
- High Breakdown Voltage and High Reliability
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1100	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Pulse	10	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	30	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$



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2SC3752

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 = 5mA; R _{BE} = ∞	800			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	1100			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.3A			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.3A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 800V ; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 0.2A ; V _{CE} = 5V	10		40	
h _{FE-2}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	8			
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A ; V _{CE} = 10V		15		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1MHz		60		pF

Switching times

t _{on}	Turn-on Time	I _C = 2A , I _{B1} = 0.4A; I _{B2} = -0.8A; R _L = 200 Ω , V _{CC} = 400V			0.5	μ s
t _{stg}	Storage Time				3.0	μ s
t _f	Fall Time				0.3	μ s

◆ h_{FE-1} Classifications

K	L	M
10-20	15-30	20-40

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