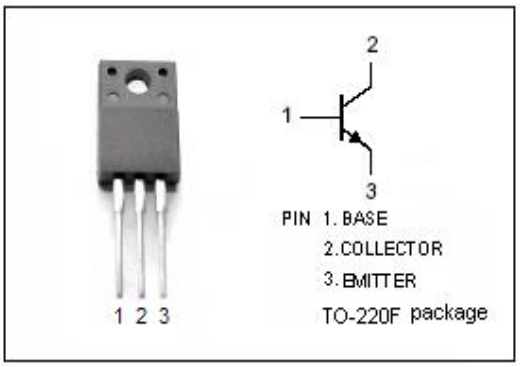
isc Silicon NPN Power Transistor 2SC3750

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 500V(Min.)
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

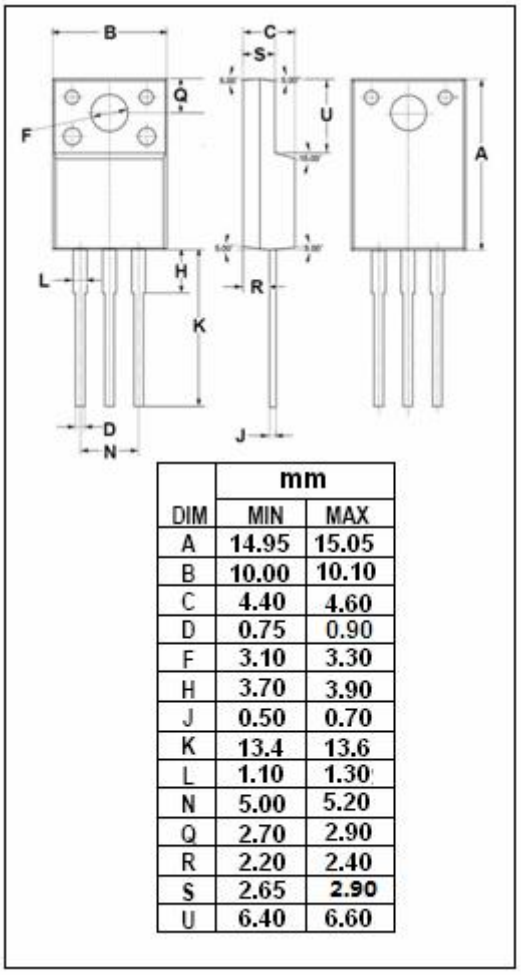


APPLICATIONS

- Designed for switching regulator applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Pulse	10	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 5mA; R_{BE}= ∞	500			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	800			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= 3A; I_B= 0.6A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 0.6A; V_{CE}= 5V	15		50	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 5V	8			
C_{OB}	Collector Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1MHz		50		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.6A; V_{CE}= 10V		18		MHz
Switching times						
t_{on}	Turn-on Time	I_C= 4A, I_{B1}= 0.8A; I_{B2}= -1.6A; R_L= 50Ω; V_{CC}= 200V			0.5	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				0.3	μs

◆ **h_{FE-1} Classifications**

L	M	N
15-30	20-40	30-50