

isc Silicon NPN Power Transistor

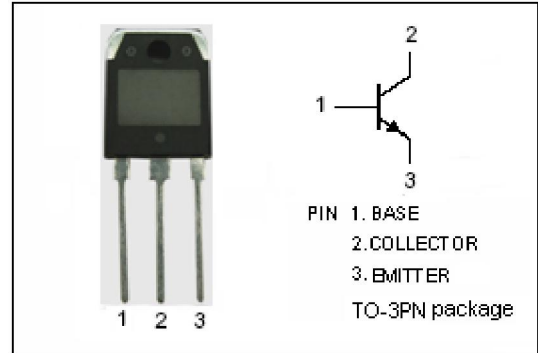
2SC2750

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min})$
- High Current Capability
- High Power Dissipation

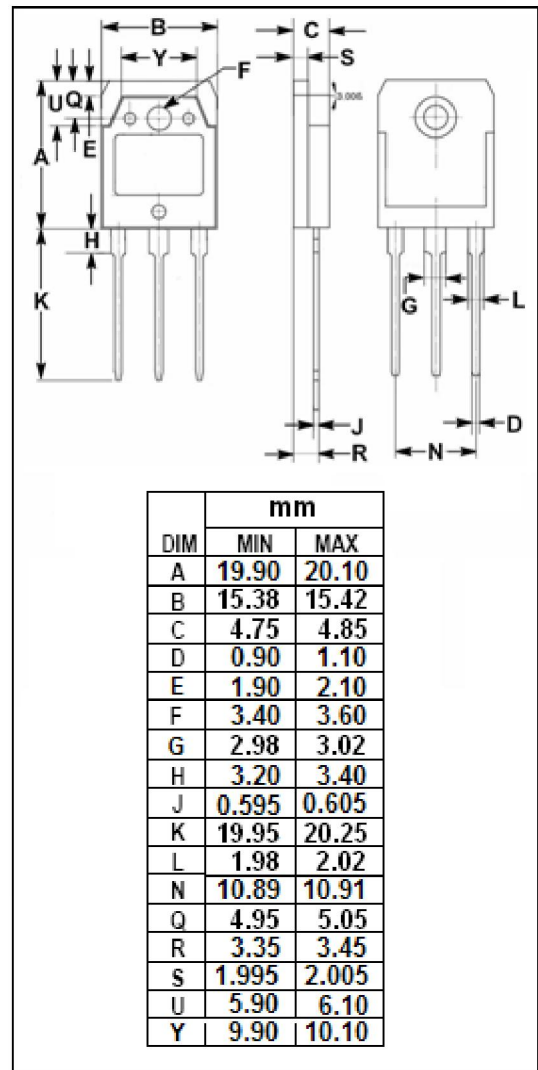
APPLICATIONS

- Designed for high speed, high current switching industrial applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor

2SC2750

ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{A}; I_{B1}=1\text{A}; L=100\ \mu\text{H}$	100			V
$V_{CEX(SUS)1}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{A}; I_{B1}=-I_{B2}=1\text{A}; T_a=125^\circ\text{C}$ $L=180\ \mu\text{H}; \text{Clamped}$	150			V
$V_{CEX(SUS)2}$	Collector-Emitter Sustaining Voltage	$I_C=20\text{A}; I_{B1}=2\text{A}; I_{B2}=1\text{A};$ $T_a=125^\circ\text{C}; L=180\ \mu\text{H}; \text{Clamped}$	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1\text{A}$			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$			10	μA
I_{CER}	Collector Cutoff Current	$V_{CE}=100\text{V}; R_{BE}=50\ \Omega; T_a=125^\circ\text{C}$			1.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=100\text{V}; V_{BE(off)}=-1.5\text{V};$ $V_{CE}=100\text{V}; V_{BE(off)}=-1.5\text{V}; T_a=125^\circ\text{C}$			10 500	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	30		120	
h_{FE-2}	DC Current Gain	$I_C=10\text{A}; V_{CE}=5\text{V}$	20			

Switching Times

t_{on}	Turn-on Time	$I_C=10\text{A}, I_{B1}=-I_{B2}=1\text{A},$ $V_{CC}\approx 50\text{V}; R_L=5\ \Omega$			1.0	μs
t_{stg}	Storage Time				1.5	μs
t_f	Fall Time				0.3	μs

◆ h_{FE-1} Classifications

M	L	K
30-60	40-80	60-120