

**isc Silicon NPN Power Transistor**

**2SC2749**

**DESCRIPTION**

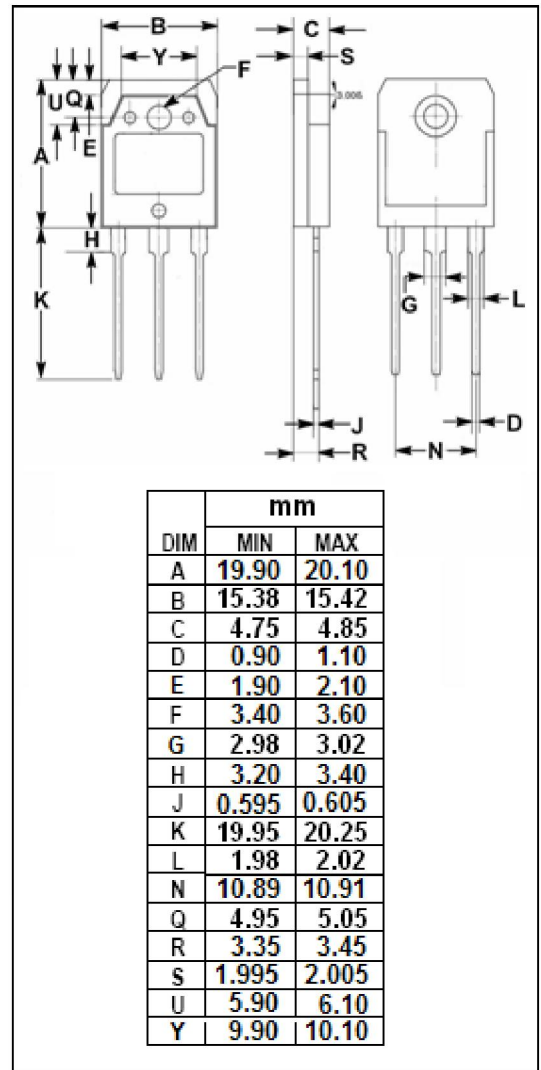
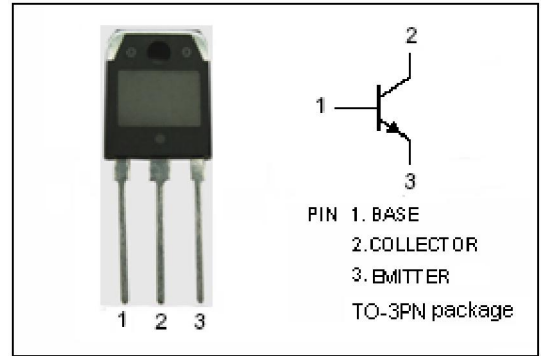
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V(\text{Min})$
- High Switching Speed
- High Reliability

**APPLICATIONS**

- High current switching industrial use
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base voltage	7	V
$I_C$	Collector Current-Continuous	10	A
$I_{CM}$	Collector Current-Peak	20	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	$^\circ\text{C}$



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## 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	$I_C=6A; I_{B1}=1.2A, L=100\mu H$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=6A; I_B=1.2A$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=6A; I_B=1.2A$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=400V; I_E=0$			0.1	mA
$I_{CEX}$	Collector Cutoff Current	$V_{CE}=400V; V_{BE(off)}=-1.5V$ $V_{CE}=400V; V_{BE(off)}=-1.5V; T_C=125^{\circ}\text{C}$			0.1 1.0	mA
$I_{CER}$	Collector Cutoff Current	$V_{CE}=400V; R_{BE}=50\Omega; T_C=125^{\circ}\text{C}$			2	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5V; I_C=0$			10	$\mu A$
$h_{FE-1}$	DC Current Gain	$I_C=1A; V_{CE}=5V$	15		80	
$h_{FE-2}$	DC Current Gain	$I_C=3A; V_{CE}=5V$	10			
$h_{FE-3}$	DC Current Gain	$I_C=6A; V_{CE}=5V$	7			

## Switching times

$t_{on}$	Turn-on Time	$I_C=6A, I_{B1}=-I_{B2}=1.2A$ $R_L=25\Omega; V_{CC}\approx 150V$			1.0	$\mu s$
$t_{stg}$	Storage Time				2.5	$\mu s$
$t_f$	Fall Time				0.7	$\mu s$

◆  $h_{FE-1}$  Classifications

N	R	O	Y
15-30	20-40	30-60	40-80