

isc Silicon NPN Power Transistor

2SC4758

DESCRIPTION

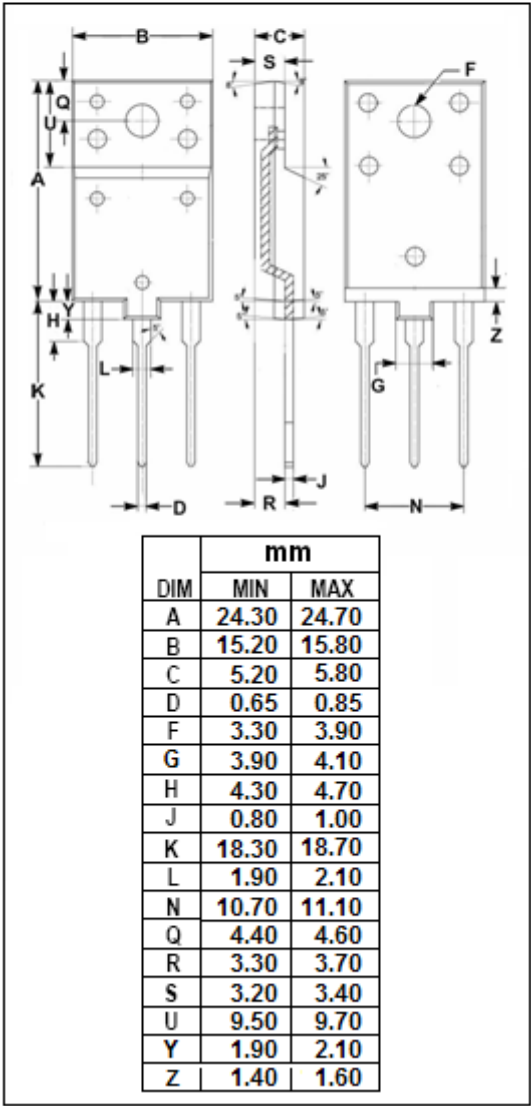
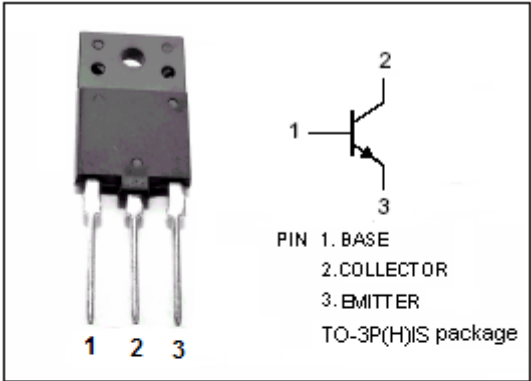
- High Breakdown Voltage-  
:  $V_{CBO}=1500V$  (Min)
- High Switching Speed
- Low Saturation Voltage

APPLICATIONS

- Horizontal deflection output for high resolution display.
- High speed switching power supply output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	600	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current- Continuous	8	A
$I_{CP}$	Collector Current-Pulse	16	A
$I_B$	Base Current- Continuous	4	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	50	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



**isc Silicon NPN Power Transistor****2SC4758****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

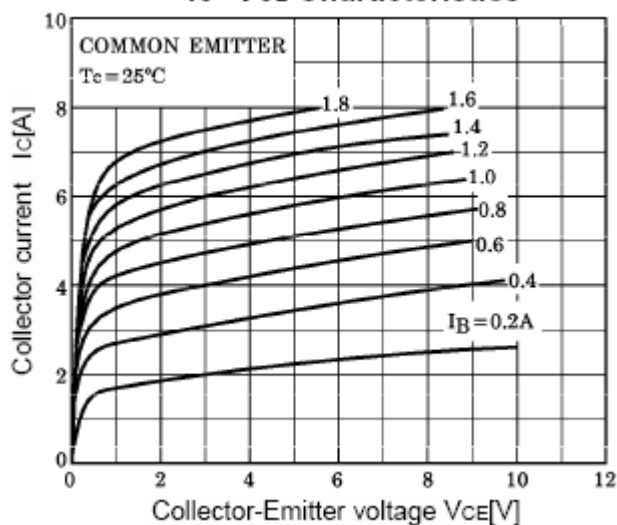
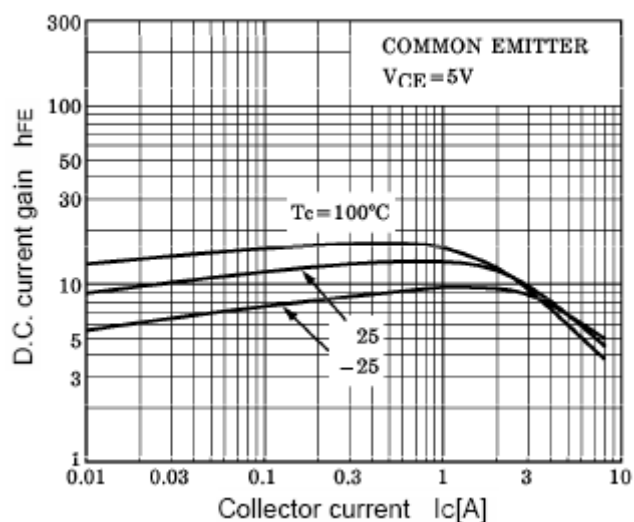
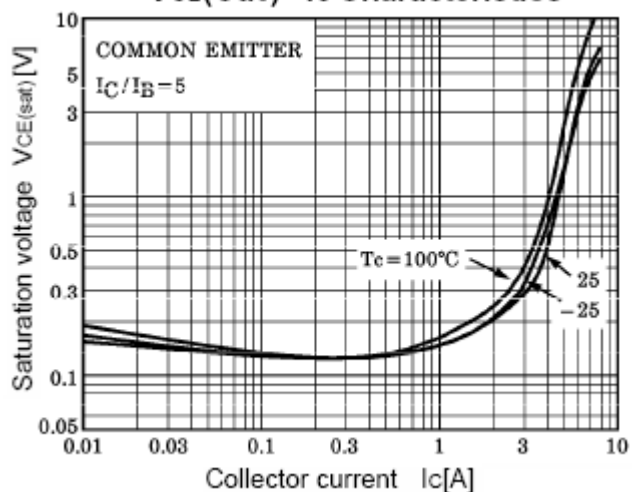
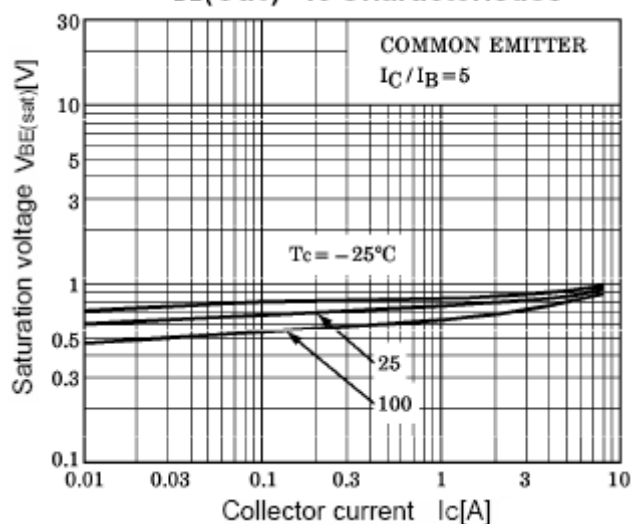
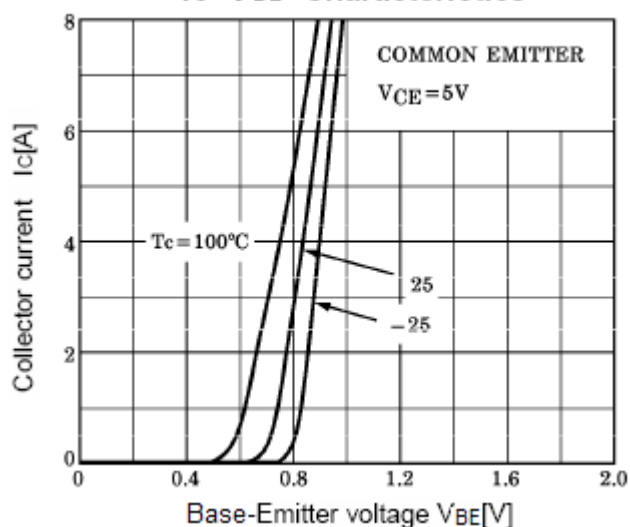
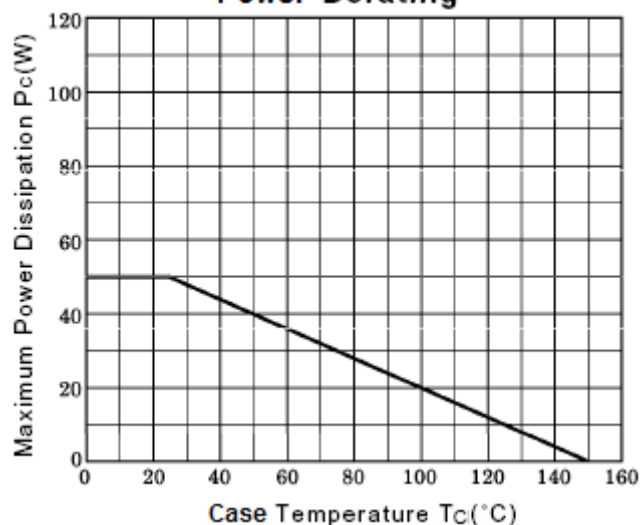
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 5mA ; I <sub>B</sub> = 0	600			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1500V ; I <sub>E</sub> = 0			1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V ; I <sub>C</sub> = 0			10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V	8			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 6A ; V <sub>CE</sub> = 5V	4		8	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.1A ; V <sub>CE</sub> = 10V	1	3		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f <sub>test</sub> =1.0MHz		175		pF

Switching times, Resistive load

t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 6A , I <sub>B1</sub> = 1.2A ; I <sub>B2</sub> = -2.4A R <sub>L</sub> =32 Ω			2.5	μ s
t <sub>f</sub>	Fall Time				0.2	μ s

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 **$I_C$ - $V_{CE}$  Characteristics** **$h_{FE}$ - $I_C$  Characteristics** **$V_{CE(sat)}$ - $I_C$  Characteristics** **$V_{BE(sat)}$ - $I_C$  Characteristics** **$I_C$ - $V_{BE}$  Characteristics****Power Derating**

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