

isc Silicon NPN Power Transistor

2SC3540

DESCRIPTION

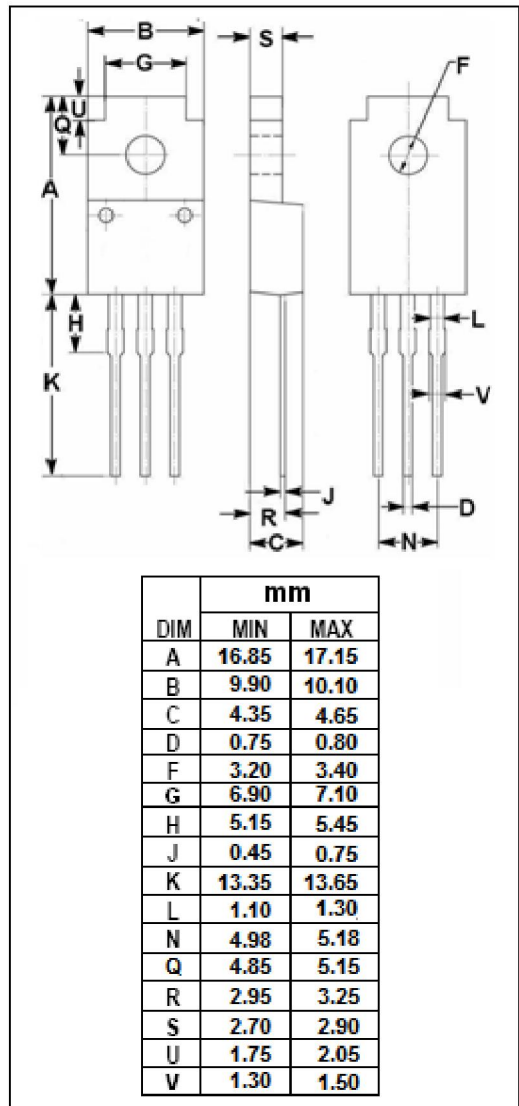
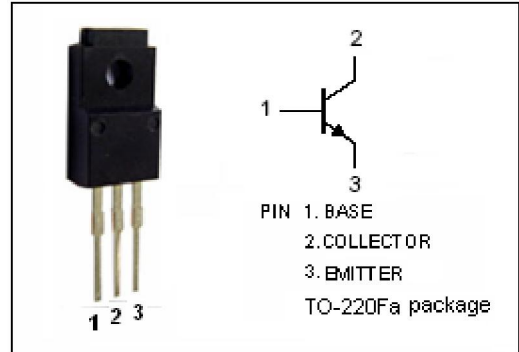
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.4V(\text{Max}) @ I_C = 3A$
- High Switching Speed
- Complement to Type 2SA1388

APPLICATIONS

- Designed for high current switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	25	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor

2SC3540

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.15\text{A}$			0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.15\text{A}$			1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$			1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			1	μA
h_{FE-2}	DC Current Gain	$I_C=1\text{A}; V_{CE}=1\text{V}$	70		240	
h_{FE-3}	DC Current Gain	$I_C=3\text{A}; V_{CE}=1\text{V}$	40			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=4\text{V}$		120		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{\text{test}}=1.0\text{MHz}$		80		pF

Switching times

t_{on}	Turn-on Time	$I_{B1}=-I_{B2}=0.15\text{A}; R_L=10\Omega;$ $V_{CC}\approx 30\text{V}$		0.2		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			0.1		μs

◆ h_{FE-1} classifications

O	Y
70-140	120-240