

**Silicon NPN Power Transistor**

**2SC5352**

**DESCRIPTION**

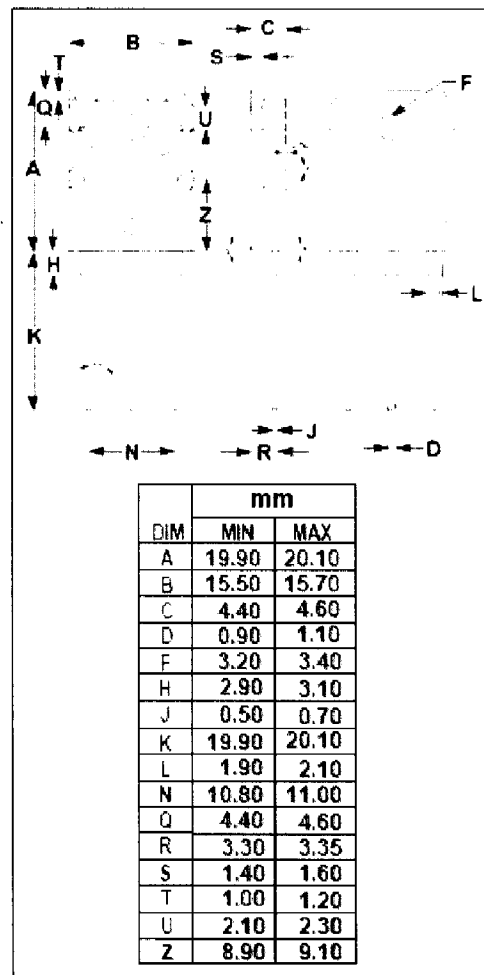
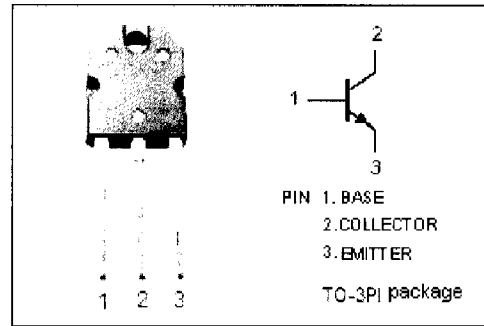
- High Collector-Emitter Breakdown Voltage-  
 :  $V_{(BR)CEO} = 400V(\text{Min})$
- High Switching Speed

**APPLICATIONS**

- Switching regulator and high voltage switching applications.
- High speed DC-DC converter applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	600	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-Pulse	15	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	80	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
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}; I_B = 0$	400			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 1\text{mA}; I_E = 0$	600			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4\text{A}; I_B = 0.5\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4\text{A}; I_B = 0.5\text{A}$			1.3	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 480\text{V}; I_E = 0$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 7\text{V}; I_C = 0$			1.0	mA
$h_{FE}$	DC Current Gain	$I_C = 1\text{A}; V_{CE} = 5\text{V}$	20			

### Switching times

$t_r$	Rise Time	$V_{CC} \approx 200\text{V}; I_{B1} = 0.5\text{A}; I_{B2} = -1\text{A};$ $R_L = 50\ \Omega; P_W = 20\ \mu\text{s}$ Duty Cycle $\leq 1\%$			0.5	$\mu\text{s}$
$t_{stg}$	Storage Time				2.0	$\mu\text{s}$
$t_f$	Fall Time				0.3	$\mu\text{s}$