

**isc Silicon NPN Power Transistors**

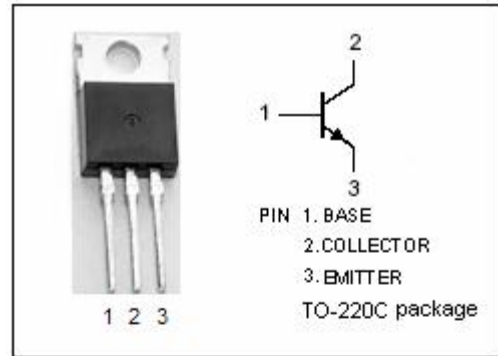
**2SC5382**

**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 550V(\text{Min})$
- High Switching Speed
- Low Collector Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

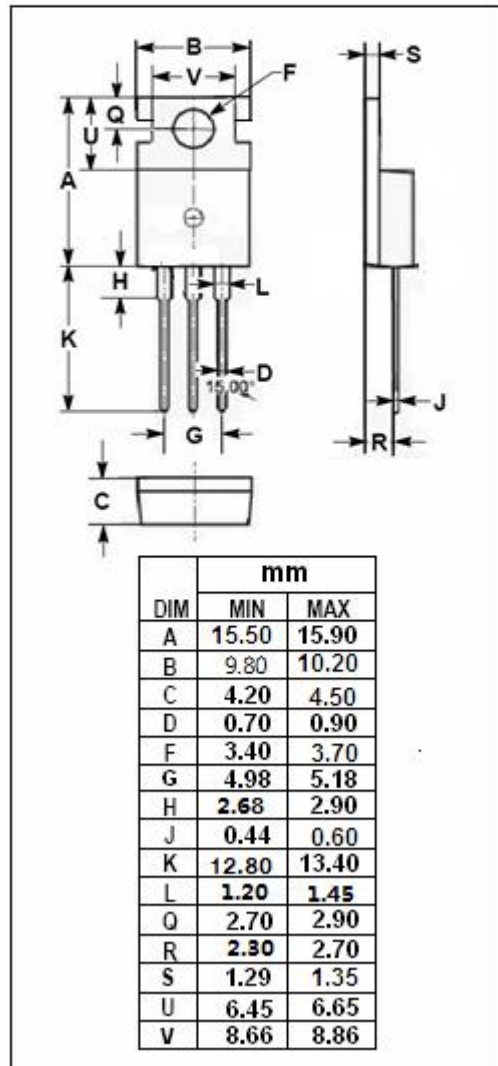
**APPLICATIONS**

- Designed for switching regulator and general purpose applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1200	V
$V_{CEO}$	Collector-Emitter Voltage	550	V
$V_{EBO}$	Emitter-Base Voltage	9	V
$I_C$	Collector Current-Continuous	6	A
$I_{CM}$	Collector Current-Peak	12	A
$I_B$	Base Current-Continuous	3	A
$I_{BM}$	Base Current-Peak	6	A
$P_T$	Total Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.13	$^\circ\text{C}/\text{W}$

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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.1\text{A}; I_B=0$	550			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.6\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.6\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=1200\text{V}; I_E=0$			100	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=550\text{V}; I_B=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=9\text{V}; I_C=0$			100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	10			
$h_{FE-2}$	DC Current Gain	$I_C=1\text{mA}; V_{CE}=5\text{V}$	10			

## Switching times

$t_{on}$	Turn-on Time	$I_C=3\text{A}, I_{B1}=0.6\text{A}; I_{B2}=-1.2\text{A};$ $R_L=50\Omega; V_{BB2}=4\text{V}$			1.3	$\mu\text{s}$
$t_{stg}$	Storage Time				4.0	$\mu\text{s}$
$t_f$	Fall Time				0.3	$\mu\text{s}$

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