

**isc Silicon NPN Power Transistor**

**KSC5367**

**DESCRIPTION**

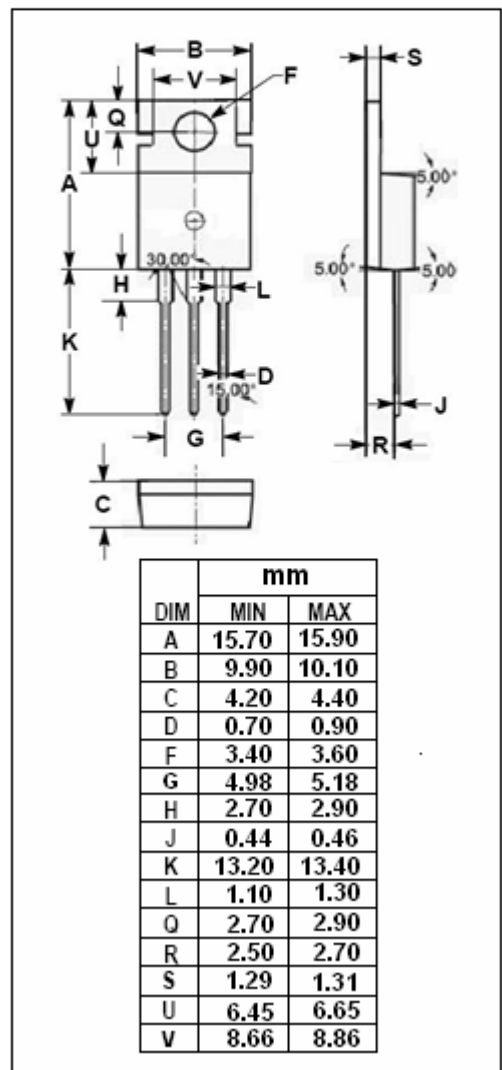
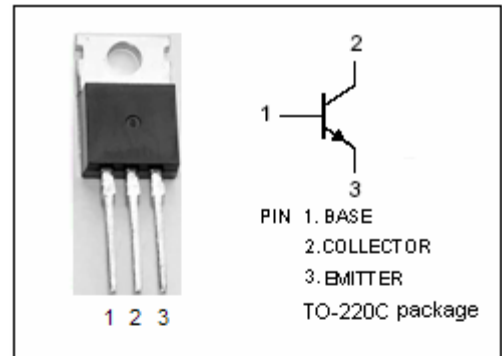
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 800V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation

**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	1600	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	12	V
$I_C$	Collector Current-Continuous	3	A
$I_{CM}$	Collector Current-Peak	6	A
$I_B$	Base Current-Continuous	2	A
$I_{BM}$	Base Current-Peak	4	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	-65~150	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	1600			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	800			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	12			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=0.25\text{A}; I_B=25\text{mA}$			2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			4.5	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$			2.5	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	$V_{CB}=1600\text{V}; I_E=0$			20	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=12\text{V}; I_C=0$			20	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=0.4\text{A}; V_{CE}=3\text{V}$	12		35	
$h_{FE-2}$	DC Current Gain	$I_C=5\text{mA}; V_{CE}=10\text{V}$	8			
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1\text{MHz}$		40		pF

## Switching Times

$t_{on}$	Turn-On Time	$I_C=0.5\text{A}; I_{B1}=42\text{mA}; I_{B2}=-333\text{mA}; V_{CC}=125\text{V}$			0.5	$\mu\text{s}$
$t_s$	Storage Time				2.2	$\mu\text{s}$
$t_f$	Fall Time				0.5	$\mu\text{s}$
$t_{on}$	Turn-On Time	$I_C=1\text{A}; I_{B1}=0.2\text{A}; I_{B2}=-0.4\text{A}; V_{CC}=250\text{V}$			0.5	$\mu\text{s}$
$t_s$	Storage Time				4.0	$\mu\text{s}$
$t_f$	Fall Time				0.5	$\mu\text{s}$