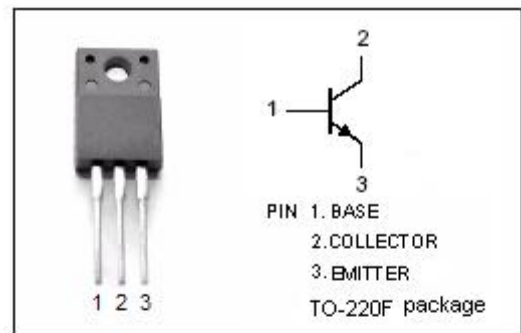


**isc Silicon NPN Power Transistors**
**KSC5021F**
**DESCRIPTION**

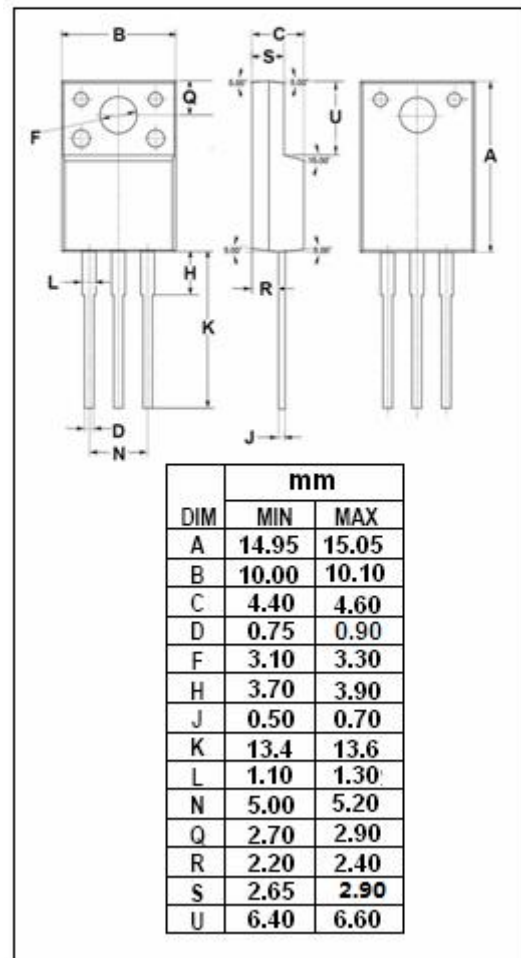
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 500V(\text{Min})$
- Collector Current- $I_C = 5A(\text{Max.})$
- Low Collector Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in drivers such as DC/DC converters and actuators.


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	800	V
$V_{CEO}$	Collector-Emitter Voltage	500	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	10	A
$I_B$	Base Current-Continuous	2	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	3.125	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS**

 T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 5mA; I <sub>B</sub> = 0	500			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.6A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.6A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	At rated Voltage			10	μ A
I <sub>CEO</sub>	Collector Cutoff Current	At rated Voltage			10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	At rated Voltage			10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 0.6A; V <sub>CE</sub> = 5V	15		50	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3A; V <sub>CE</sub> = 5V	8			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.6A; V <sub>CE</sub> = 10V		15		MHz

**◆ h<sub>FE-1</sub> Classifications**

R	O	Y
15-30	20-40	30-50

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