



### High Voltage and High Reliability

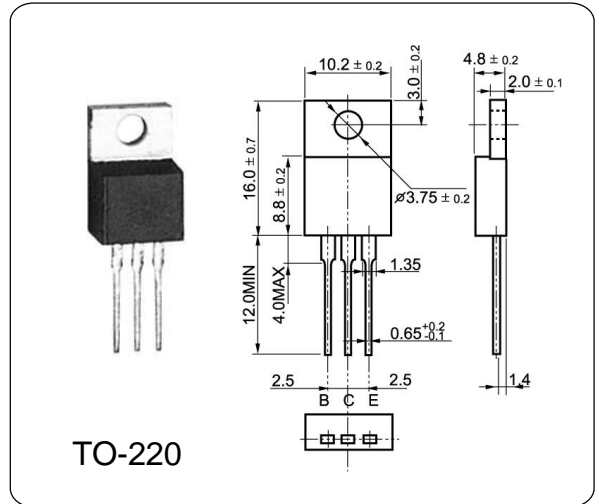
### KSC5027

#### DESCRIPTION

- NPN Silicon Transistor
- High Speed Switching
- Wide SOA

#### Absolute Maximum Ratings ( Ta = 25°C )

Parameter	I	Value	Unit
Collector-Base Voltage	$V_{CBO}$	1100	V
Collector-Emitter Voltage	$V_{CEO}$	800	V
Emitter-Base Voltage	$V_{EBO}$	7.0	V
Collector Current	$I_C$	3.0	A
Base Current	$I_B$	1.5	A
Total Dissipation at	$P_{tot}$	50	W
Max. Operating Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C



#### Electrical Characteristics ( Ta = 25°C )

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	$I_{CBO}$	$V_{CE}=800V, I_E=0$	—	—	10	uA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	—	—	10	uA
Collector-Emitter Sustaining Voltage	$V_{CEO}$	$I_C=10mA, I_B=0$	800	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.2A$	10	—	40	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=1.0A$	8	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5A, I_B=0.3A$	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5A, I_B=0.3A$	—	—	1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=0.2A$	—	15	—	MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1.0MHz$	—	60	—	pF
Turn Off Time	$t_S$	$I_C=5I_{B1}=-2.5I_{B2}=2.0A,$	—	—	3.0	us

#### $h_{FE}$ Classification

Classification	N	R	O
$h_{FE1}$	10 ~ 20	15 ~ 30	20 ~ 40