



High Voltage and High Reliability

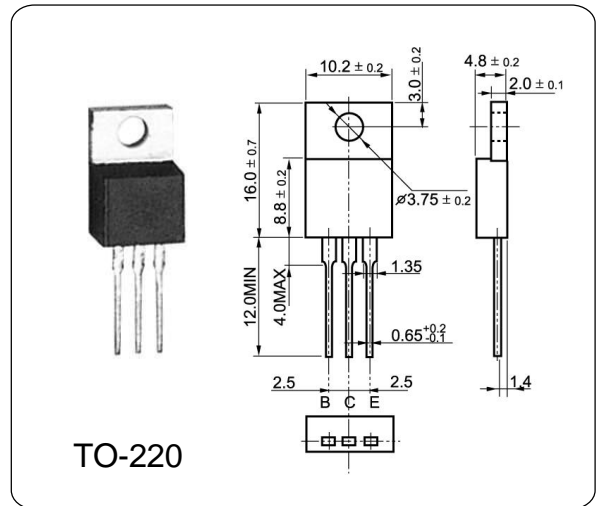
KSC5027

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