FAIRCHILD

SEMICONDUCTOR TM

KSC5027

High Voltage and High Reliability

- High Speed Switching
- Wide SOA



1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	1100	V
V _{CEO}	Collector-Emitter Voltage	800	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current (DC)	3	А
I _{CP}	Collector Current (Pulse)	10	А
I _B	Base Current	1.5	А
P _C	Collector Dissipation (T _C =25°C)	50	W
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 55 ~ 150	°C

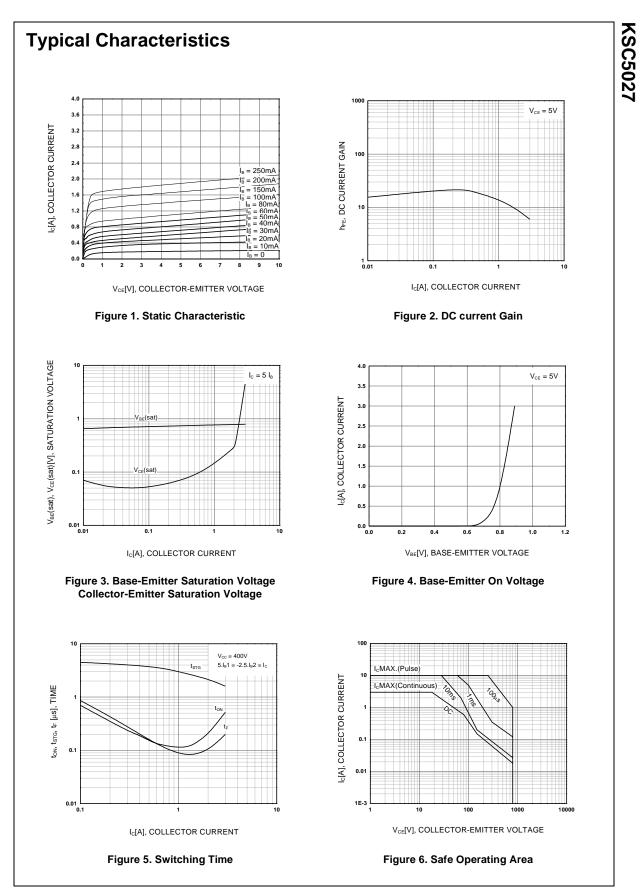
Electrical Characteristics ${\rm T_{C}=25^{\circ}C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	$I_{\rm C} = 1 {\rm mA}, \ I_{\rm E} = 0$	1100			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 5mA, R _{BE} =∞	800			V
BV _{EBO}	Emitter-Base Breakdown Voltage	$I_{\rm E} = 1$ mA, $I_{\rm C} = 0$	7			V
V _{CEX} (sus)	Collector-Emitter Sustaining Voltage	$I_{C} = 1.5A, I_{B1} = -I_{B2} = 0.3A$ L = 2mH, Clamped	800			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 800 \text{V}, I_{E} = 0$			10	μΑ
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_{C} = 0$			10	μΑ
h _{FE1} h _{FE2}	DC Current Gain	$V_{CE} = 5V, I_{C} = 0.2A$ $V_{CE} = 5V, I_{C} = 1A$	10 8		40	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = 1.5A, I _B = 0.3A			2	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C = 1.5A, I _B = 0.3A			1.5	V
C _{ob}	Output Capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$		60		pF
f _T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_{C} = 0.2A$		15		MHz
t _{ON}	Turn ON Time	$V_{CC} = 400V$			0.5	μs
t _{STG}	Storage Time	$I_{\rm C} = 5I_{\rm B1} = -2.5I_{\rm B2} = 2A$			3	μs
t _F	Fall Time	$R_L = 200\Omega$			0.3	μs

h_{FE} Classification

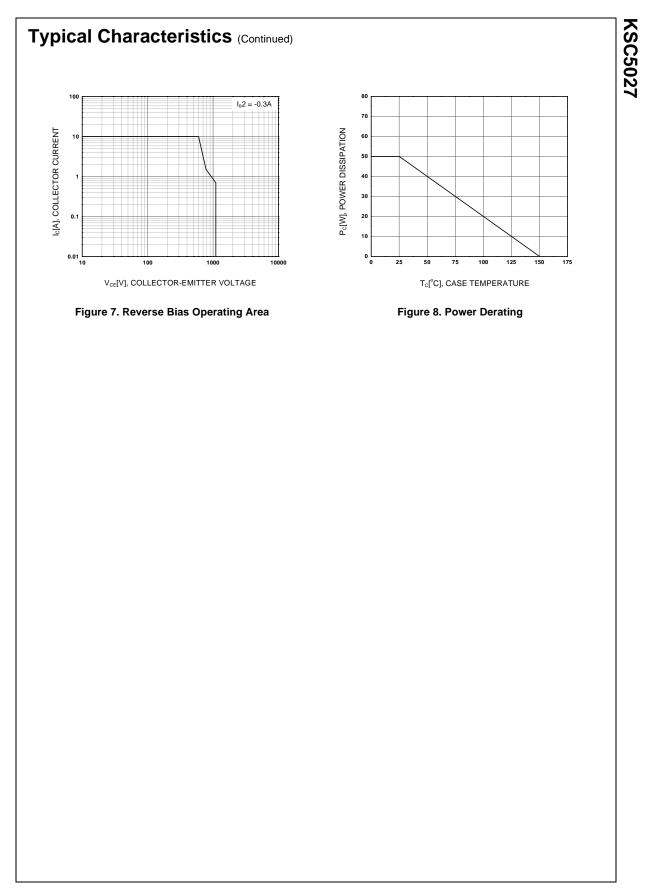
Classification	Ν	R	0
h _{FE1}	10 ~ 20	15 ~ 30	20 ~ 40

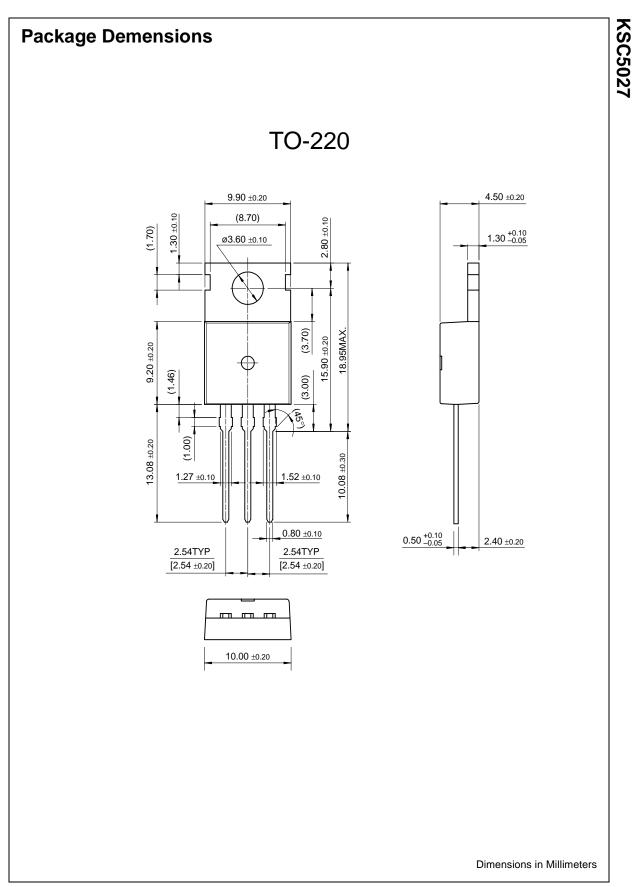
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