

KSC2335F

High Speed, High Voltage Switching

Industrial Use



NPN Epitaxial Silicon Transistor

1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	500	V
V _{CEO}	Collector-Emitter Voltage	400	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current (DC)	7	Α
I _{CP}	*Collector Current (Pulse)	15	Α
I _B	Base Current	3.5	Α
P _C	Collector Dissipation (T _C =25°C)	40	W
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 55 ~ 150	°C

^{*} PW≤300μs, Duty Cycle≤10%

Electrical Characteristics $T_C=25$ °C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V _{CEO} (sus)	Collector-Emitter Sustaining Voltage	I_{C} =3A, I_{B1} =0.6A, L = 1mH	400		V
V _{CEX} (sus)1	Collector-Emitter Sustaining Voltage	$I_C=3A,I_{B1}=-I_{B2}=0.6A$ $V_{BE}(off)=-5V, L=180\mu H, Clamped$	450		V
V _{CEX} (sus)2	Collector-Emitter Sustaining Voltage	I _C =6A, I _{B1} =2A, I _{B2} =-0.6A V _{BE} (off)=-5V, L = 180μH, Clamped	400		V
I _{CBO}	Collector Cut-off Current	$V_{CE} = 400V, I_{E} = 0$		10	μΑ
I _{CER}	Collector Cut-off Current	V_{CE} =400V, R_{BE} = 51 Ω @ T_{C} = 125°C		1	mA
I _{CEX1}	Collector Cut-off Current	V_{CE} =400V, V_{BE} (off) = -1.5V		10	μА
I _{CEX2}	Collector Cut-off Current	V_{CE} =400V, V_{BE} (off) = -1.5V @ T_a =125°C		1	mA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_C = 0$		10	μΑ
h _{FE1} h _{FE2} h _{FE3}	* DC Current Gain	$V_{CE}=5V, I_{C}=0.1A$ $V_{CE}=5V, I_{C}=1A$ $V_{CE}=5V, I_{C}=3A$	20 20 10	80	
V _{CE} (sat)	* Collector-Emitter Saturation Voltage	I _C =3A, I _B =0.6A		1	V
V _{BE} (sat)	* Base-Emitter Saturation Voltage	I _C =3A, I _B =0.6A		1.2	V
t _{ON}	Turn ON Time	V _{CC} =150V, I _C =3A		1	μs
t _{STG}	Storage Time	I _{B1} =-I _{B2} =0.6A		2.5	μs
t _F	Fall Time	$R_L=50\Omega$		1	μs

^{*} Pulse Test: PW≤350μs, Duty Cycle≤2% Pulsed

h_{FE} Classification

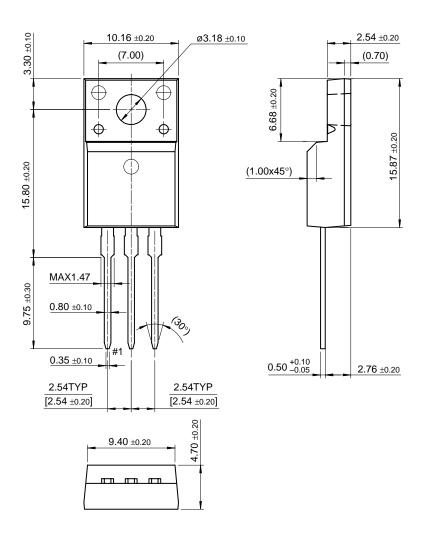
Classification	R	0	Υ	
h _{FE1}	20 ~ 40	30 ~ 60	40 ~ 80	

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Package Demensions

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TO-220F



Dimensions in Millimeters

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