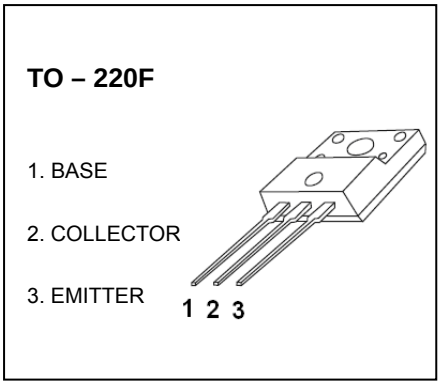
TO-220F Plastic-Encapsulate Transistors

KSC5021F TRANSISTOR (NPN)



FEATURES

- High Speed Switching
- High Voltage and High Reliability
- Wide ASO

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

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	5	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	800			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=5mA,I_B=0	500			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA,I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=500V,I_E=0			10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			10	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.6A	15		50	
	$h_{FE(2)}$	V_{CE}=5V, I_C=3A	8			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=3A,I_B=0.6A			1	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C=3A,I_B=0.6A			1.5	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		80		pF
Transition frequency	f_T	V_{CE}=10V,I_C=0.6A		15		MHz

CLASSIFICATION OF $h_{FE\ (1)}$

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