

KSC5030F

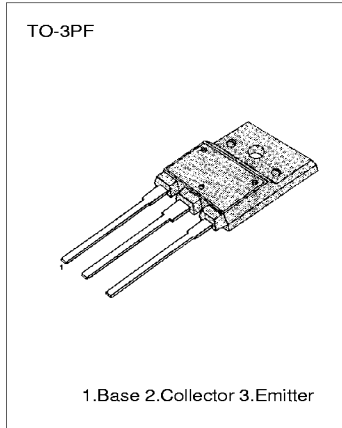
NPN SILICON TRANSISTOR

HIGH VOLTAGE AND HIGH RELIABILITY

- HIGH SPEED SWITCHING
- WIDE SOA

ABSOLUTE MAXIMUM RATING

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V _{CB0}	1100	V
Collector Emitter Voltage	V _{CEO}	800	V
Emitter Base Voltage	V _{EBO}	7	V
Collector Current (DC)	I _C	6	A
Collector Current (Pulse)	I _C	20	A
Base Current	I _B	3	A
Collector Dissipation (T _C =25°C)	P _C	60	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ 150	°C



ELECTRICAL CHARACTERISTICS (T_C=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current (V _{BE} =0)	BV _{CB0}	I _C = 1mA, I _E = 0	1100			V
Collector Cutoff Current	BV _{CEO}	I _C = 5mA, R _{BE} = ∞	800			V
Emitter Cutoff Current	BV _{EBO}	I _E = 1mA, I _C = 0	7			V
DC Current Gain	V _C EX(sus)	I _C = 3A, I _{B1} = -I _{B2} = 0.6A L = 1mH, Clamped	800			V
Collector Cutoff Current	I _{CB0}	V _{CB} = 800V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE1}	V _{CE} = 5V, I _C = 0.4A	10		40	
	h _{FE2}	V _{CE} = 5V, I _C = 2A	8			
Collector Emitter Saturation Voltage	V _{CE(sat)}	I _C = 3A, I _B = 0.6A			2	V
Base Emitter Saturation Voltage	V _{BE(sat)}	I _C = 3A, I _B = 0.6A			1.5	V
Output Capacitance	C _{OB}	V _{CE} = 10V, I _E = 0, f = 1MHz		120		pF
Current Gain Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.4A		15		MHz
Turn On Time	t _{ON}	V _{CC} = 400V			0.5	μs
Storage Time	t _{STG}	5I _{B1} = -2.5I _{B2} = I _C = 4A			3	μs
Fall Time	t _F	R _L = 100Ω			0.3	μs

h_{FE}(1) CLASSIFICATION

Classification	R	O	Y
h _{FE}	15 ~ 30	20 ~ 40	30 ~ 50