

KSC2333

NPN EPITAXIAL SILICON TRANSISTOR

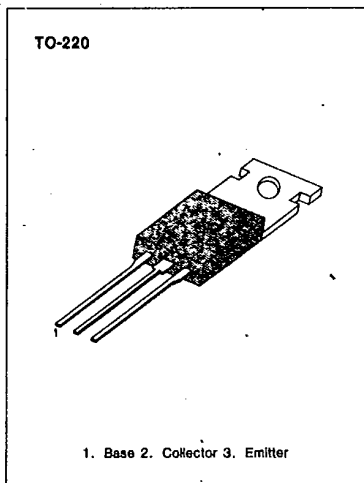
T-33-07

**HIGH SPEED SWITCHING
LOW COLLECTOR SATURATION VOLTAGE
SPECIFIED OF REVERSE BIASED SOA
WITH INDUCTIVE LOADS**

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	500	V
Collector-Emitter Voltage	V _{CE0}	400	V
Emitter-Base Voltage	V _{EB0}	7	V
Collector Current (DC)	I _C	2	A
* Collector Current (Pulse)	I _C	4	A
Base Current (DC)	I _B	1	A
Collector Dissipation	P _C	15	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~150	°C

* PW<350μs, Duty Cycle <10%



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ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Emitter Sustaining Voltage	V _{CE0(sus)}	I _C =0.5A, I _B =0.1A, L=1mH	400		V
Collector-Emitter Sustaining Voltage	V _{CEX(sus)1}	I _C =0.5A, I _{B1} =-I _{B2} =0.1A	450		V
Collector-Emitter Sustaining Voltage	V _{CEX(sus)2}	T _a =125°C, L=180μH, Clamped I _C =1A, I _{B1} =0.2A, -I _{B2} =0.2A	400		V
Collector Cutoff Current	I _{CB0}	V _{CB} =400V, I _E =0		10	μA
Collector Cutoff Current	I _{CE1}	V _{CE} =400V, R _{BE} =51Ω, T _a =125°C		1	mA
Collector Cutoff Current	I _{CEX1}	V _{CE} =400V, V _{BE(off)} =-5V		10	μA
Collector Cutoff Current	I _{CEX2}	V _{CE} =400V, V _{BE(off)} =-5V		1	mA
Emitter Cutoff Current	I _{EB0}	T _a =125°C V _{EB} =5V, I _C =0		10	μA
* DC Current Gain	h _{FE1}	V _{CE} =5V, I _C =0.1A	20	80	
	h _{FE2}	V _{CE} =5V, I _C =0.5A	10		
* Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.5A, I _B =0.1A		1	V
* Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =0.5A, I _B =0.1A		1.2	V
Turn On Time	t _{on}	I _C =0.5A, I _{B1} =-I _{B2} =0.1A		1	μS
Storage Time	t _{stg}	RL=300Ω, V _{CC} =150V		2.5	μS
Fall Time	t _f			1	μS

* Pulse Test: PW<350μs, Duty Cycle<2% Pulsed

h_{FE} (1) CLASSIFICATION

Classification	R	O	Y
h _{FE1}	20-40	30-60	40-80