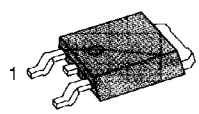
KSH13003 NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE POWER TRANSISTOR
D-PACK FOR SURFACE MOUNT APPLICATIONS

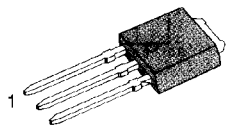
- High speed Switching
- Suitable for Switching Regulator Motor Control
- Straight Lead (I.PACK, I Suffix)
- Lead Formed for Surface Mount Applications (No Suffix)

D-PAK



1. Base 2. Collector 3. Emitter

I-PAK



1. Base 2. Collector 3. Emitter

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current (DC)	I_C	1.5	A
Collector Current (Pulse)	I_C	3	A
Base Current	I_B	0.75	A
Collector Dissipation (T_C=25°C)	P_C	40	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_C =25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
* Collector Emitter Breakdown Voltage	V_{CEO} (sus)	I_C = 5mA, I_B = 0	400			V
Emitter Cutoff Current	I_{EBO}	V_{EB} = 9V, I_C = 0			10	µA
* DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 0.5A	8		40	
		V_{CE} = 1V, I_C = 2A	5			
* Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 0.5A, I_B = 0.1A			0.5	V
		I_C = 1A, I_B = 0.25A			1	V
		I_C = 1.5A, I_B = 0.5A			3	V
* Base Emitter Saturation Voltage	V_{BE}(sat)	I_C = 0.5A, I_B = 0.1A			1	V
		I_C = 1A, I_B = 0.25A			1.2	V
Output Capacitance	C_{OB}	V_{CB} = 10V, f = 0.1MHz		21		pF
Current - Gain Bandwidth Product	f_T	V_{CE} = 10V, I_C = 0.1A	4			MHz
Turn on time	t_{ON}	V_{CC} = 125V			1.1	µs
Storage time	t_{STG}	I_C = 1A			4.0	µs
Fall Time	t_F	I_B1 = 0.2A, I_B2 = - 0.2A			0.7	µs

* Pulse Test: Pulse Width=5ms, Duty Cycle≤10%

FAIRCHILD SEMICONDUCTOR™