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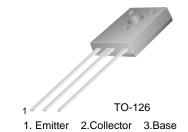


KSC5026M NPN Silicon Transistor

January 2011

Features

- High Voltage and High Reliability
- · High Speed Switching
- Wide SOA



Absolute Maximum Ratings $T_A = 25$ °C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	1100	V
V _{CEO} Collector-Emitter Voltage		800	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current (DC)	1.5	A
I _{CP}	Collector Current (Pulse)	5	A
I _B Base Current		0.8	А
P _C	Collector Dissipation (T _C =25°C)	20	W
T _J Junction Temperature		150	°C
T _{STG} Storage Temperature		- 55 to 150	°C

Package Marking and Ordering Information

Part Number	Marking	Package	Packing Method	Remarks
KSC5026MOS*	C5026M-O	TO-126	BULK	

^{*} The suffix "M" & "S" of FSID denotes TO126 package and the suffix "O" of FSID denotes h_{FE}-class

Electrical Characteristics $T_A = 25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	$I_C = 1 \text{mA}, I_E = 0$	1100			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 5mA, I_B = 0$	800			V
BV _{EBO}	Emitter-Base Breakdown Voltage	$I_E = 1 \text{mA}, I_C = 0$	7			V
V _{CEX} (sus)	Collector-Emitter Sustaining Voltage	$I_C = 0.75A$, $I_{B1} = -I_{B2} = 0.15A$, L = 5mH, Clamped	800			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 800V, I_{E} = 0$			10	μΑ
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_{C} = 0$			10	μΑ
h _{FE1} h _{FE2}	DC Current Gain	$V_{CE} = 5V, I_{C} = 0.1A$ $V_{CE} = 5V, I_{C} = 0.5A$	10 8		40	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_C = 0.75A, I_B = 0.15A$			2	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	$I_C = 0.75A, I_B = 0.15A$			1.5	V
C _{ob}	Output Capacitance	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$		35		pF
f _T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_{C} = 0.1A$		15		MHz
t _{ON}	Turn On Time	V _{CC} = 400V			0.5	μS
t _{STG}	Storage Time	$I_C = 5I_{B1} = -2.5I_{B2} = 1A$			3	μS
t _F	Fall Time	$R_L = 400\Omega$			0.3	μS

hFE Classification

Classification		N	R	0	
	h _{FE1}	10 ~ 20	15 ~ 30	20 ~ 40	

Typical Performance Characteristics

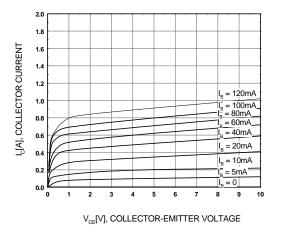


Figure 1. Static Characteristic

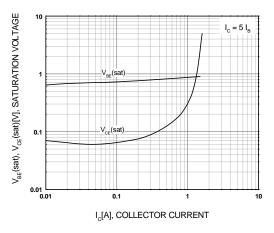


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

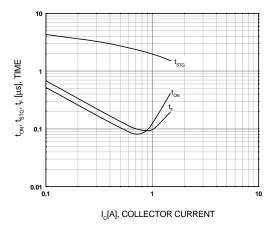


Figure 5. Switching Time

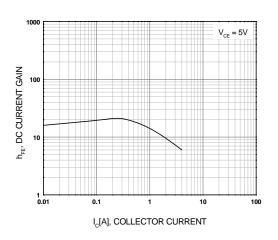


Figure 2. DC current Gain

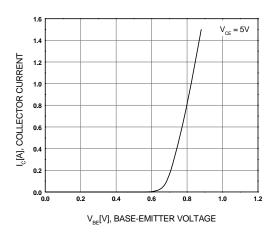


Figure 4. Base-Emitter On Voltage

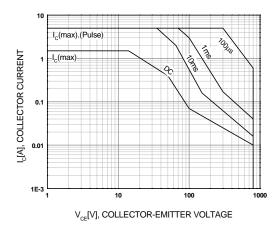


Figure 6. Safe Operating Area

Typical Performance Characteristics

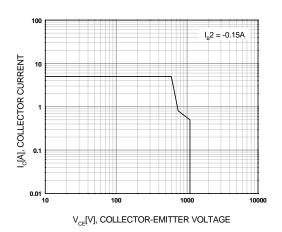


Figure 7. Reverse Bias Safe Operating Area

(Continued)

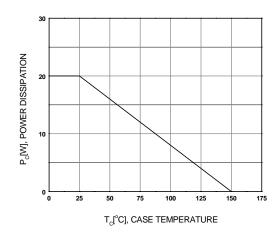
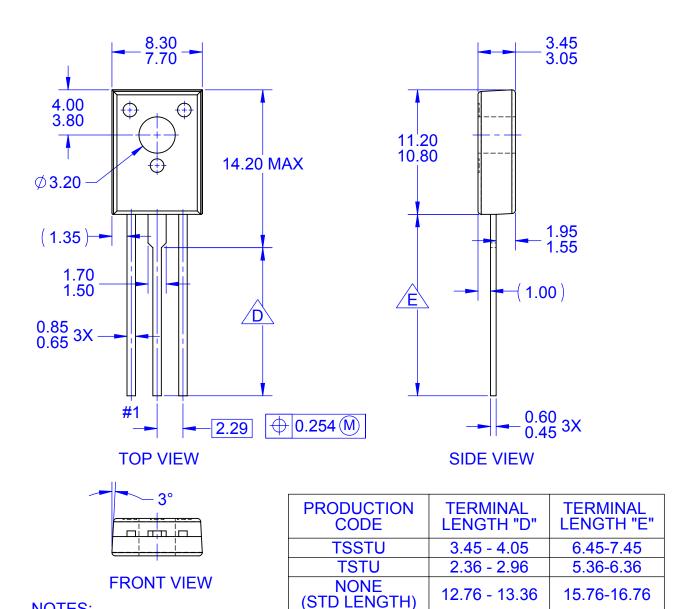


Figure 8. Power Derating



NOTES:

- Α. NO INDUSTRY STANDARD APPLIES TO THIS **PACKAGE**
- ALL DIMENSIONS ARE IN MILLIMETERS B.
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS







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