HSiN Semiconductor

13007

STANDARD

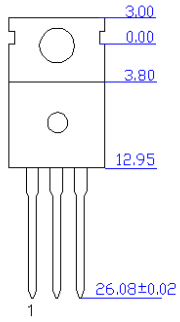
△HIGH VOLTAGE SWITCH MODE APPLICATIONS

- High Speed Switching
- Suitable for Switching Regulator and Motor Control

△ABSOLUTE MAXIMUM RATINGS (TA=25℃)

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	8	A
Collector Dissipation	T_A=25℃	P_C	2	W
	T_C=25℃	P_C	80	W
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55-150	℃

TO-220



1. Base 2. Collector 3. Emitter

△ELECTRICAL CHARACTERISTICS (TA=25℃)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	V_{CB}=700V, I_E=0			1	mA
Emitter Cut-off Current	I_{EBO}	V_{EB}=9V, I_C=0			1	mA
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	400			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=1mA, I_C=0	9			V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=1mA, I_E=0	700			V
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=2A, I_B=400mA			1.0	V
	V_{CE}(sat)	I_C=5A, I_B=1A			2.0	V
	V_{CE}(sat)	I_C=8A, I_B=2A			3.0	V
Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C=2A, I_B=400mA			1.2	V
	V_{BE}(sat)	I_C=5A, I_B=1A			1.6	V
DC Current Gain	H_{FE1}	V_{CE}=5V, I_C=2A	8		40	
	H_{FE2}	V_{CE}=5V, I_C=5A	5			
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=0.5A	4			MHz
Output Capacitance	C_{OB}	V_{CB}=10V, f=0.1MHz		110		pF
Turn ON Time	t_{ON}	I_C=5A, I_{B1}=I_{B2}=1A, V_{CC}=125V, R_L=50Ω			1.6	us
Storage Time	t_S				3.0	us
Fall Time	t_F				0.7	us