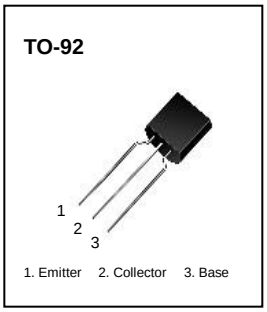
PTM15003T

NPN Silicon Power Transistor
1.5 Amperes / 1.1 Watts

Switch Mode series NPN silicon Power Transistor

- High voltage, high speed power switching
- Suitable for switching regulator, inverters motor controls



Absolute Maximum Ratings TC=25℃ unless otherwise noted

CHARACTERISTICS	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	800	V
Collector-Emitter Voltage (V_{EB}=0)	V_{CES}	800	V
Collector-Emitter Voltage (I_B=0)	V_{CEO}	450	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current(DC)	I_C	1.5	A
Collector Current(Pulse)	I_{CP}	3.0	A
Collector Dissipation(Tc=25℃)	P_C	1.1	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~150	℃

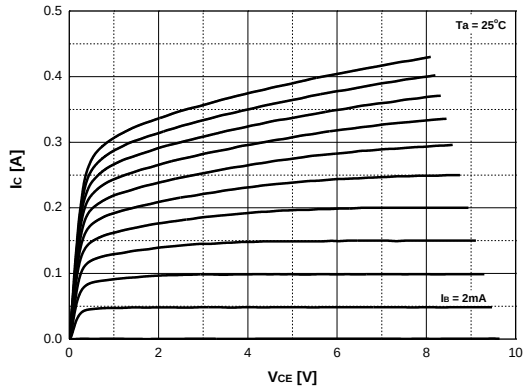
Electrical Characteristics TC=25℃ unless otherwise noted

CHARACTERISTICS	SYMBOL	Test Condition	Min	Typ.	Max	Unit
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=1mA, I_B=0	450			V
Collector-Emitter Leakage Current	I_{CES}	V_{CE}=800V			5	uA
Emitter Cut-off Current	I_{EBO}	V_{EB}=9V,I_C=0			0.1	mA
*DC Current Gain	h_{FE1} h_{FE2} h_{FE3}	V_{CE}=5V,I_C=5mA V_{CE}=5V,I_C=0.2A V_{CE}=5V,I_C=1.0A	10 10 5		40	- - -
	h_{FE1} / h_{FE2}	-	0.75			-
*Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=0.5A,I_B=0.1A			0.8	V
*Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C=0.5A,I_B=0.1A			1.2	V
Current Gain Bandwidth Product	f_T	V_{CE}=10V,I_C=0.1A	5			MHz
Storage Time	t_{stg}	Vcc=5V, Ic=0.1A (UI9600)	2.0		6.0	μS
Fall Time	t_f				1.0	μS

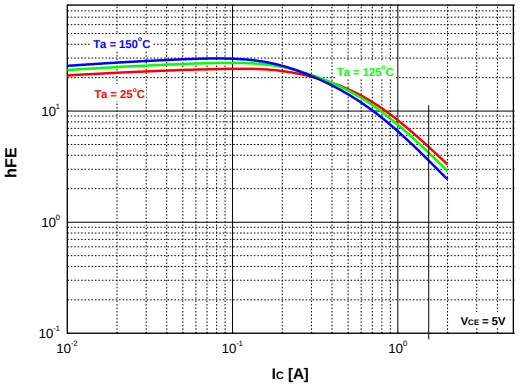
* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

Typical Characteristics

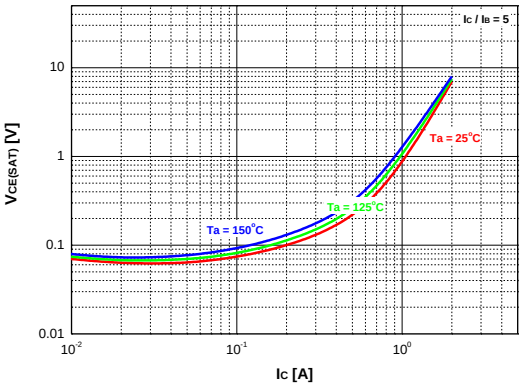
Static Charateristic



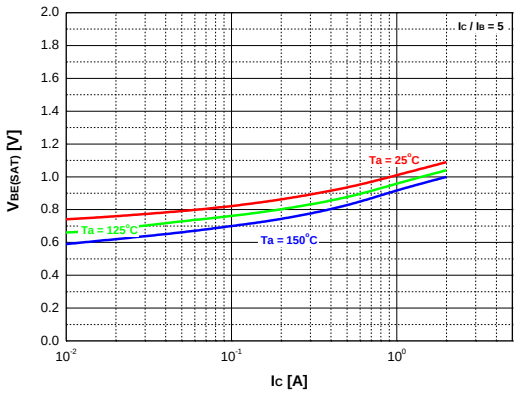
DC Current Gain



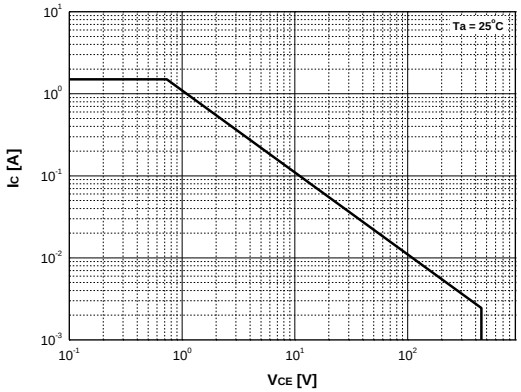
Collector-Emitter Saturation Voltage



Base-Emitter Saturation Voltage



Safe Operating Area



Power Derating