Green Package

PTM13004G

NPN Silicon Power Transistor
3 Amperes / 3 Watts

TO-92

1. Emitter 2. Collector 3. Base

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}	700	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current(DC)	I_C	3	A
Collector Current(Pulse)	I_{CP}	6	A
Base Current	I_B	1.5	A
Collector Dissipation(Tc=25℃)	P_C	3	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~150	℃

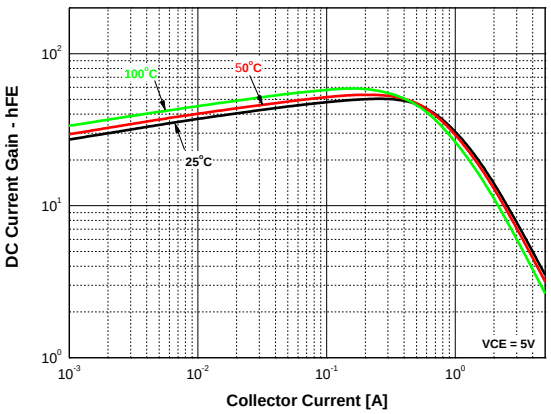
Electrical Characteristics TC=25℃ unless otherwise noted

CHARACTERISTICS	SYMBOL	Test Condition	Min	Typ.	Max	Unit
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=10mA, I_B=0	400	--	--	V
Emitter Cut-off Current	I_{EBO}	V_{EB}=9V,I_C=0	--	--	10	μA
*DC Current Gain	h_{FE1} h_{FE2}	V_{CE}=5V,I_C=1A V_{CE}=5V,I_C=2A	20 6	-- --	40 --	-- --
*Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=1.0A,I_B=0.2A I_C=2.0A,I_B=0.5A I_C=3.0A,I_B=0.75A	-- -- --	-- -- --	0.5 1.0 5.0	V V V
*Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C=1.0A,I_B=0.2A I_C=2.0A,I_B=0.5A	-- --	-- --	1.2 1.6	V V
Output Capacitance	C_{ob}	V_{CB}=10V, f=0.1MHz	--	35	--	pF
Current Gain Bandwidth Product	f_T	V_{CE}=10V,I_C=0.1A	4	--	--	MHz
Storage Time	t_{stg}	Vcc=5V, Ic=0.5A Ib=10mA (UI9600)	--	2.0	5.0	μS
Fall Time	t_F		--	0.6	0.8	μS

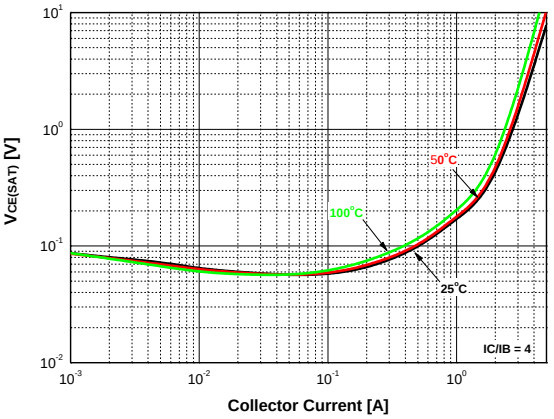
* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

Typical Characteristics

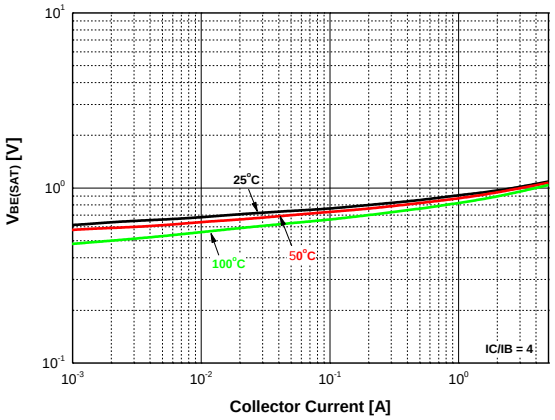
DC Current Gain



Collector-Emitter Saturation Voltage



Base-Emitter Saturation Voltage



Power Derating