



PTU13004G/PTD13004G

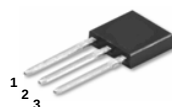
NPN Silicon Power Transistor
3 Amperes / 40 Watts

Switch Mode series

NPN silicon Power Transistor

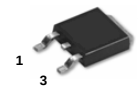
- High voltage, high speed power switching
- Suitable for switching regulator, inverters motor controls

PTU13004G
I-PAK(TO-251)



1. Base
2. Collector
3. Emitter

PTD13004G
D-PAK(TO-252)



1. Base
2. Collector
3. Emitter

Absolute Maximum Ratings TC=25°C 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	1.2	A
Collector Dissipation(Tc=25°C)	P_C	40	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~150	°C

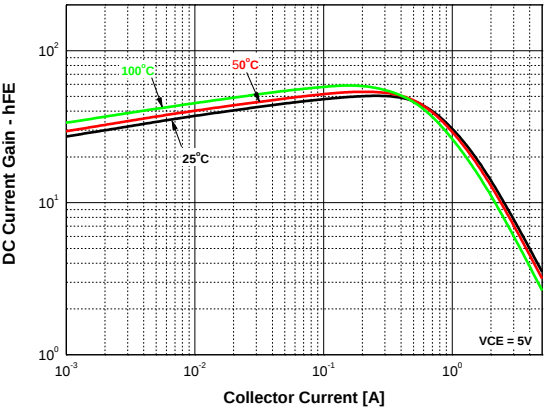
Electrical Characteristics TC=25°C unless otherwise noted

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}	$V_{CC}=5V, I_C=0.5A$ $I_B=10mA$ (UI9600)	--	2.0	5.0	μS
Fall Time	t_F		--	0.6	0.8	μS

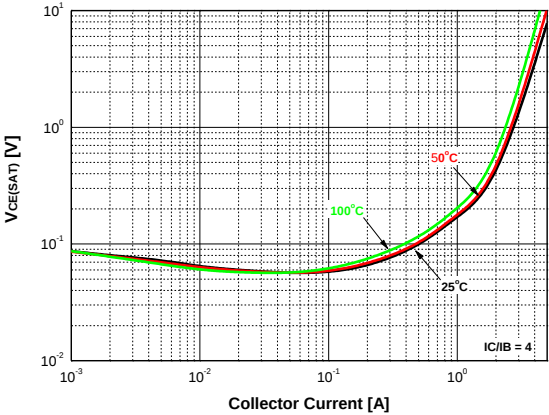
* Pulse Test: Pulse Width≤300μs, Duty Cycles≤2%

Typical Characteristics

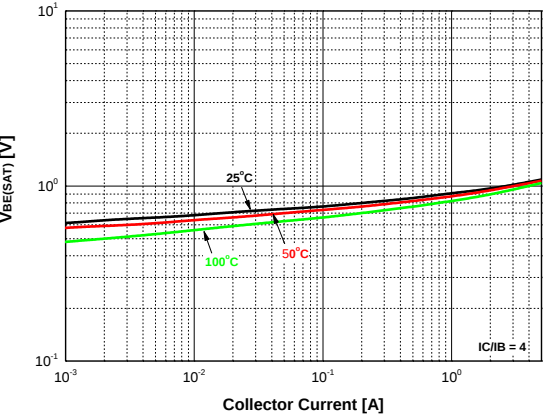
DC Current Gain



Collector-Emitter Saturation Voltage



Base-Emitter Saturation Voltage



Power Derating

