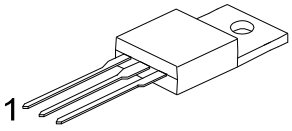
D45VH10

PNP SILICON TRANSISTOR

PNP COMPLEMENTARY SILICON POWER TRANSISTORS



TO-220

■ DESCRIPTION

The UTC **D45VH10** is complementary silicon power transistors are designed for high-speed switching applications, such as switching regulators and high frequency inverters. The devices are also well-suited for drivers for high power switching circuits.

■ FEATURES

* Low Collector-Emitter Saturation Voltage:
  $V_{CE(SAT)}$=-1.0V (Max.) @ -8.0A
* Complementary Pairs Simplify Circuit Designs

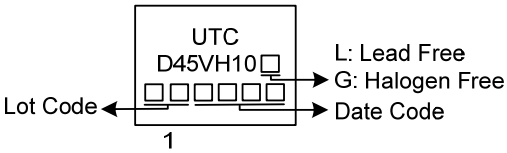
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
D45VH10L-TA3-T	D45VH10G-TA3-T	TO-220	B	C	E	Tube

Note: Pin Assignment: B: Base C: Collector E: Emitter

D45VH10G-TA3-T (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) TA3: TO-220 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-100	V
Collector-Emitter Voltage		V_{CEO}	-80	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-15	A
	Pulse(Note 2)	I_{CM}	-20	A
Power Dissipation	T_C=25°C	P_D	83	W
Junction Temperature		T_J	-40 ~ +150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. Pulse Width ≤ 6.0ms, Duty Cycle ≤ 50%.

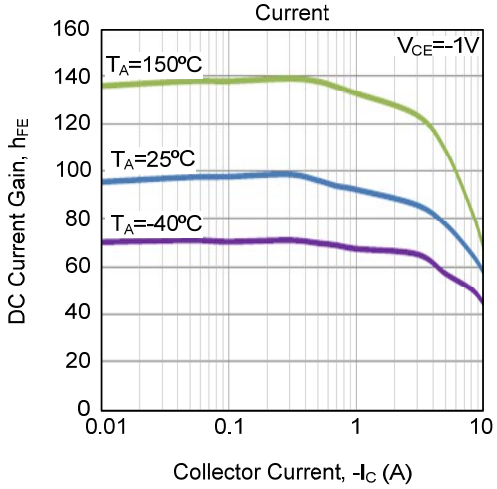
■ ELECTRICAL CHARACTERISTICS (T_C=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	I_C=-25mA, I_B=0	-80			V
Collector-Emitter Cutoff Current	I_{CEV}	V_{CE}=Rated V_{CEV}, $V_{BE(OFF)}$=4.0V			-10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-7.0V, I_C=0			-10	μA
ON CHARACTERISTICS(Note)						
DC Current Gain	h_{FE}	V_{CE}=-1.0V, I_C=-2.0A	35			
		V_{CE}=-1.0V, I_C=-4.0A	20			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-8.0A, I_B=-0.8A			-1.0	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-8.0A, I_B=-0.8A			-1.5	V
DYNAMIC CHARACTERISTICS						
Current Gain Bandwidth Product	f_T			50		MHz
Output Capacitance	Cob			275		pF

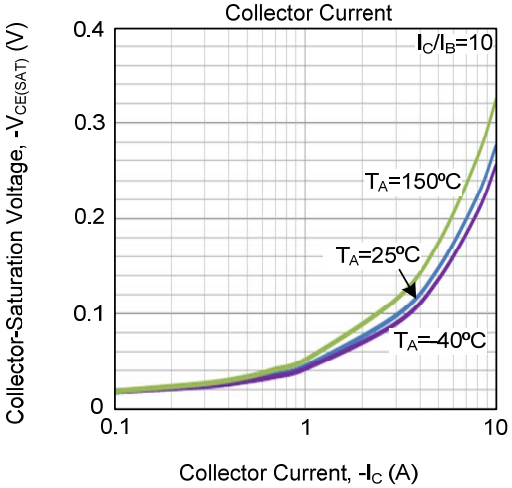
Note: Pulse test: Pulse Width≦300μs, Duty Cycle≦2%.

■ TYPICAL CHARACTERISTICS

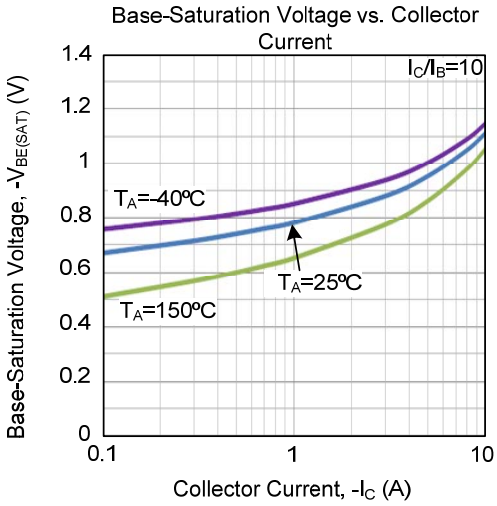
DC Current Gain vs. Collector Current



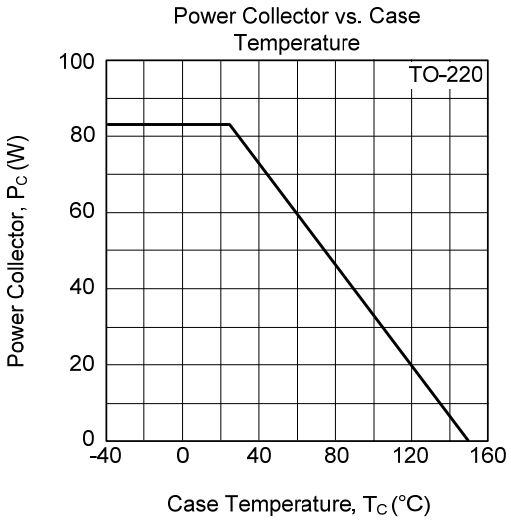
Collector-Saturation Voltage vs. Collector Current



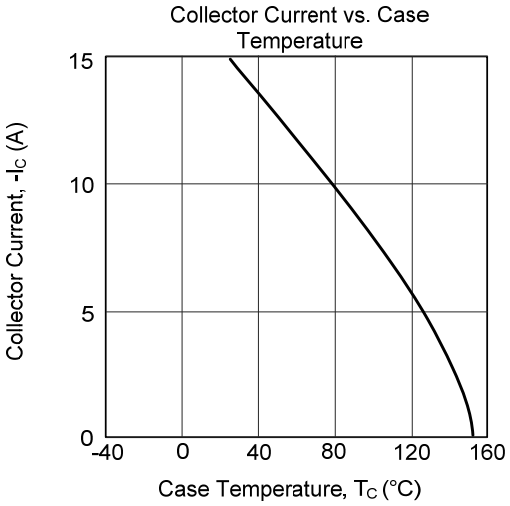
Base-Saturation Voltage vs. Collector Current



Power Collector vs. Case Temperature



Collector Current vs. Case Temperature



Safe Operating Area