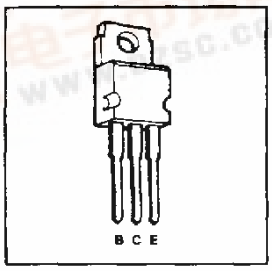
查询TP117供应商 捷多邦，专业PCB打样工厂，24小时加急出货

TIP115,TIP116,TIP117
PNP DARLINGTON - CONNECTED SILICON POWER TRANSISTORS

SLPS053 Revised March 1990

- **Designed for Complementary Use with TIP110, TIP111 and TIP112**
- **50 W at 25°C Case Temperature**
- **4 A Continuous Collector Current**
- **Min h_{FE} of 500 at 4 V, 2 A**
- **Designed for Ignition Systems, Motor Control and Solenoid Driver Applications**



PACKAGE: TO220

Absolute Maximum Ratings at 25°C Case Temperature (unless otherwise noted)

		TIP115	TIP116	TIP117
V_{CBO}	Collector - base voltage (I_E = 0)	-60 V	-80 V	-100 V
V_{CEO}	Collector - emitter voltage (I_B =0)	-60 V	-80 V	-100 V
V_{EBO}	Base - emitter voltage	-5 V		
I_C	Continuous collector current	-4 A		
I_{CM}	Peak collector current (Note 1)	-6 A		
I_B	Continuous base current	-50 mA		
P_{tot}	Continuous device dissipation at (or below) 25°C case temperature (Note 2)	50 W		
P_{tot}	Continuous device dissipation at (or below) 25°C free - air temperature (Note 3)	2 W		
$I_C^2L/2$	Unclamped inductive load energy (Note 4)	25 mJ		
T_j & T_{stg}	Operating junction and storage temperature range	-65°C to + 150°C		
T_L	Lead temperature 3.2 mm from case for 10 seconds	260°C		

NOTES 1. This value applies for $t_w \leq 0.3$ ms, duty cycle $\leq 10\%$.
2. Derate linearly to 150°C case temperature at the rate of 0.4 W/°C.
3. Derate linearly to 150°C free - air temperature at the rate of 16 mW/°C.
4. This rating is based on the capability of the transistors to operate safely in a circuit of: L = 20 mH, R_{BB2} = 100 Ω, V_{BB2} = 0 V, R_S = 0.1 Ω, V_{CC} = -20 V. Energy = $I_C^2L/2$.

Electrical Characteristics at 25°C Case Temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS		MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector - emitter sustaining voltage	I_C = -30 mA (Note 5) I_B = 0	TIP115 TIP116 TIP117	-60 -80 -100			V
I_{CEO}	Collector - emitter cut - off current	V_{CE} = -30 V I_B = 0 V_{CE} = -40 V I_B = 0 V_{CE} = -50 V I_B = 0	TIP115 TIP116 TIP117			-2 -2 -2	mA
I_{CBO}	Collector cut - off current	V_{CB} = -60 V I_E = 0 V_{CB} = -80 V I_E = 0 V_{CB} = -100 V I_E = 0	TIP115 TIP116 TIP117			-1 -1 -1	mA
I_{EBO}	Emitter cut - off current	V_{EB} = -5 V I_C = 0				-2	mA
h_{FE}	Forward current transfer ratio	V_{CE} = -4 V I_C = -1 A V_{CE} = -4 V I_C = -2 A	(Notes 5 & 6)	1000 500			
$V_{CE(sat)}$	Collector - emitter saturation voltage	I_B = -8 mA I_C = -2 A	(Notes 5 & 6)			-2.5	V
V_{BE}	Base - emitter voltage	V_{CE} = -4 V I_C = -2 A	(Notes 5 & 6)			-2.8	V
V_F	Parallel diode forward voltage	I_F = -I_C = -5 A I_B = 0	(Notes 5 & 6)			3.5	V

找PDF 维库一下 pdf.dzsc.com

Resistive - Load - Switching Characteristics at 25°C Case Temperature (unless otherwise noted)

	PARAMETER	TEST CONDITIONS†			MIN	TYP	MAX	UNIT
t_{on}	Turn on time	I_C = -2 A	$I_{B(on)}$ = -8 mA	$I_{B(off)}$ = 8 mA		2.6		µs
t_{off}	Turn off time	$V_{BE(off)}$ = 5 V	R_L = 15 Ω			4.5		µs

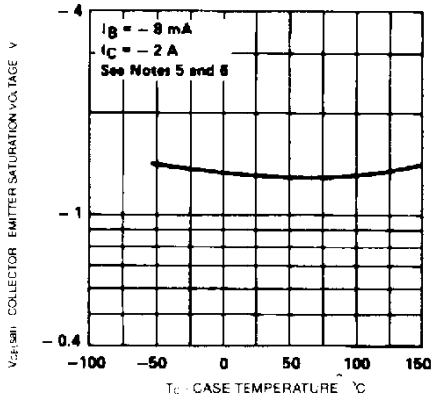
† Voltage and current values shown are nominal; exact values vary slightly with transistor parameters.

NOTES 5. These parameters must be measured using pulse techniques. t_w = 300µs, duty cycle ≤ 2%.

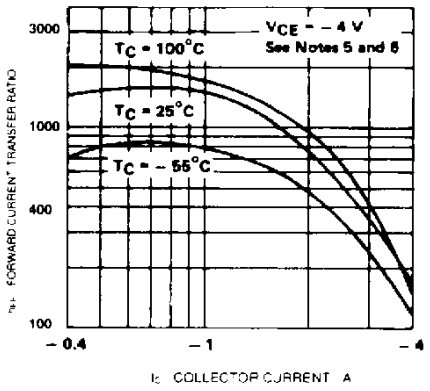
6. These parameters must be measured using voltage-sensing contacts separate from the current-carrying contacts.

TYPICAL CHARACTERISTICS

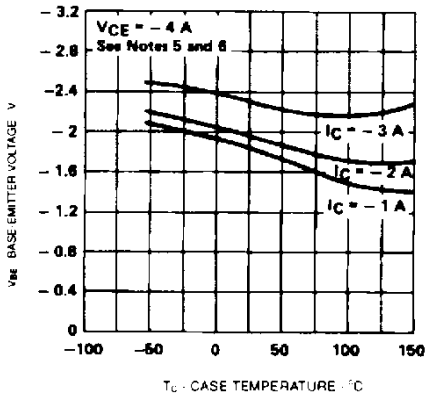
COLLECTOR - EMITTER SATURATION VOLTAGE vs CASE TEMPERATURE



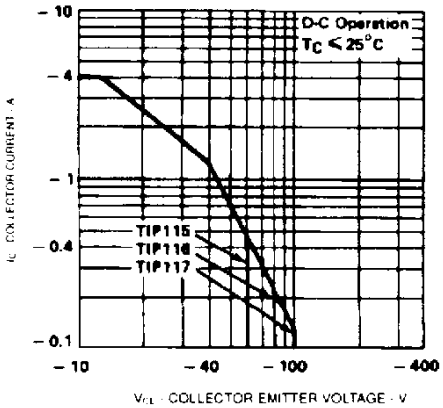
FORWARD CURRENT TRANSFER RATIO vs COLLECTOR CURRENT



BASE-EMITTER VOLTAGE vs CASE TEMPERATURE



MAXIMUM FORWARD - BIAS SAFE OPERATING AREA



IMPORTANT NOTICE

Texas Instruments and its subsidiaries (TI) reserve the right to make changes to their products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgement, including those pertaining to warranty, patent infringement, and limitation of liability.

TI warrants performance of its semiconductor products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are utilized to the extent TI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.

CERTAIN APPLICATIONS USING SEMICONDUCTOR PRODUCTS MAY INVOLVE POTENTIAL RISKS OF DEATH, PERSONAL INJURY, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE ("CRITICAL APPLICATIONS"). TI SEMICONDUCTOR PRODUCTS ARE NOT DESIGNED, AUTHORIZED, OR WARRANTED TO BE SUITABLE FOR USE IN LIFE-SUPPORT DEVICES OR SYSTEMS OR OTHER CRITICAL APPLICATIONS. INCLUSION OF TI PRODUCTS IN SUCH APPLICATIONS IS UNDERSTOOD TO BE FULLY AT THE CUSTOMER'S RISK.

In order to minimize risks associated with the customer's applications, adequate design and operating safeguards must be provided by the customer to minimize inherent or procedural hazards.

TI assumes no liability for applications assistance or customer product design. TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of TI covering or relating to any combination, machine, or process in which such semiconductor products or services might be or are used. TI's publication of information regarding any third party's products or services does not constitute TI's approval, warranty or endorsement thereof.

Copyright © 1998, Texas Instruments Incorporated