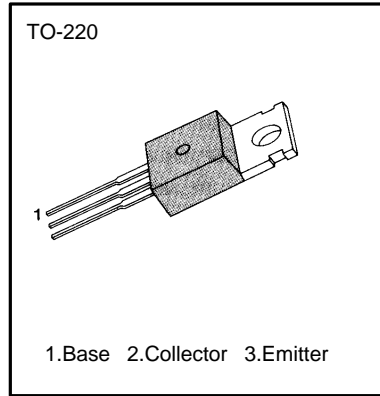


# PNP EPITAXIAL TIP115/116/117 SILICON DARLINGTON TRANSISTOR

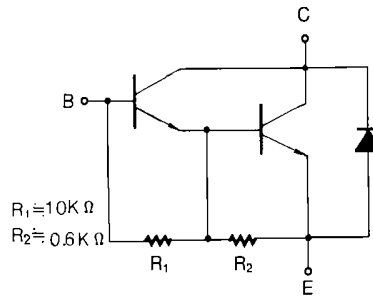
**HIGH DC CURRENT GAIN**  
**MIN  $h_{FE}=1000$  @  $V_{CE}=-4V$ ,  $I_C=-1A$**   
**LOW COLLECTOR-EMITTER**  
**SATURATION VOLTAGE**  
**MONOLITHIC CONSTRUCTION WITH BUILT**  
**IN BASE-EMITTER SHUNT RESISTORS**  
**INDUSTRIAL USE**

• Complementary to TIP110/111/112



### ABSOLUTE MAXIMUM RATINGS

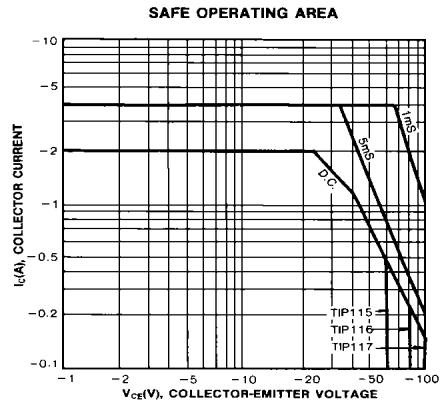
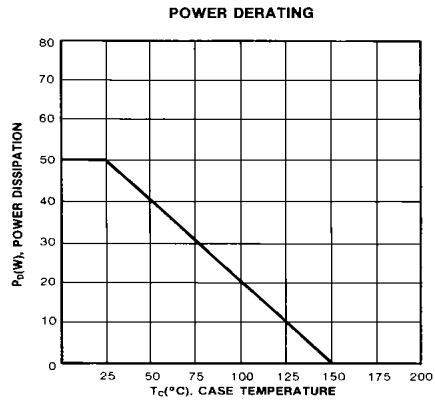
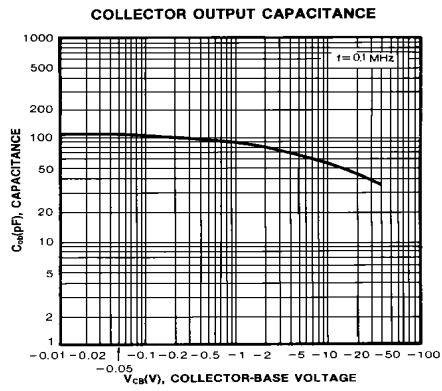
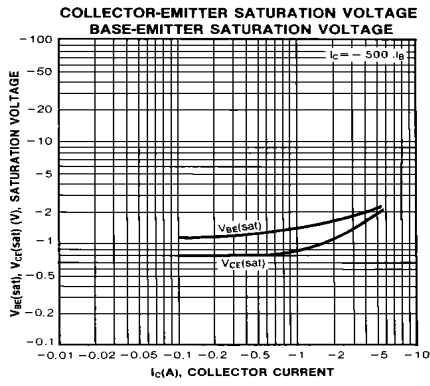
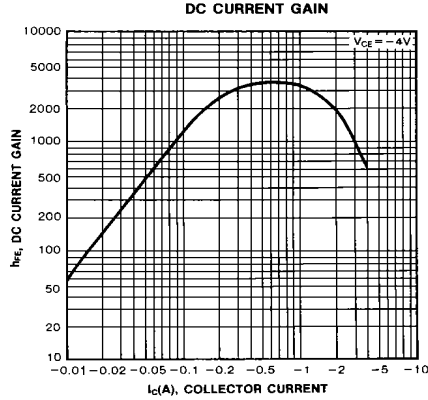
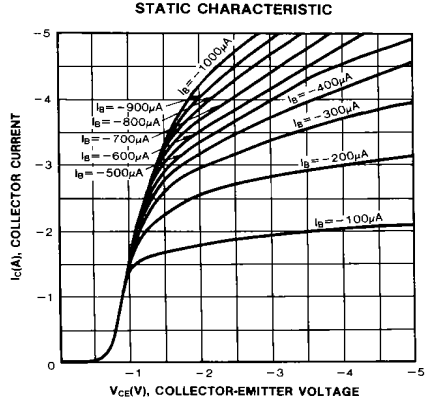
Characteristic	Symbol	Rating	Unit
Collector Base Voltage :TIP115	$V_{CBO}$	-60	V
: TIP116		-80	V
: TIP117		-100	V
Collector Emitter Voltage			
:TIP115	$V_{CEO}$	-60	V
:TIP116		-80	V
:TIP117		-100	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current (DC)	$I_C$	-2	A
Collector Current (Pulse)	$I_C$	-4	A
Base Current (DC)	$I_B$	-50	mA
Collector Dissipation ( $T_A=25^\circ C$ )	$P_C$	2	W
Collector Dissipation ( $T_C=25^\circ C$ )	$P_C$	50	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{STG}$	-65 ~ 150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ C$ )

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = -30mA$ , $I_B = 0$			
: TIP115			-60		V
: TIP116			-80		V
: TIP117			-100		V
Collector Cutoff Current	$I_{CEO}$	$V_{CE} = -30V$ , $I_B = 0$		-2	mA
: TIP115		$V_{CE} = -40V$ , $I_B = 0$		-2	mA
: TIP116		$V_{CE} = -50V$ , $I_B = 0$		-2	mA
: TIP117		$V_{CB} = -60V$ , $I_E = 0$		-1	mA
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -80V$ , $I_E = 0$		-1	mA
: TIP115		$V_{CB} = -100V$ , $I_E = 0$		-1	mA
: TIP116				-2	mA
: TIP117				-2	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{BE} = -5V$ , $I_C = 0$		-2	mA
DC Current Gain	$h_{FE}$	$V_{CE} = -4V$ , $I_C = -1A$	1000		
		$V_{CE} = -4V$ , $I_C = -2A$	500		
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2A$ , $I_B = -8mA$		-2.5	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -4V$ , $I_C = -2A$		-2.8	V
Output Capacitance	$C_{OB}$	$V_{CB} = -10V$ , $I_E = 0$ , $f = 0.1MHz$		200	pF

# NPN EPITAXIAL TIP115/116/117 SILICON DARLINGTON TRANSISTOR



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FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
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