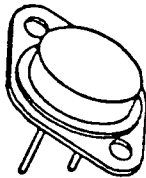


X00135

<b>SFT6925A</b> <b>NPN HIGH VOLTAGE</b> <b>HIGH SPEED</b> <b>POWER TRANSISTOR</b> <b>60 AMPS, 1000V</b>	<b>SSDI</b>
	14849 FIRESTONE BLVD. LA MIRADA, CA. 90638  (213) 921-9660 FAX (213) 921-2396

**CASE STYLE**  
**JEDEC TO-3 WITH .060 PINS**



### FEATURES

- ▶ VERY FAST SWITCHING SPEED (100KHz)
- ▶ HIGH VOLTAGE (1000V)
- ▶ LOW VCE (SAT) AT IC = 20A
- ▶ HIGH CURRENT REPLACEMENT FOR: 2N6678, 2N6921A, 2N6923A, 2N6924A, 2N6925A, MJ16018
- ▶ EXTENDED RBSOA & FBSOA (see Fig. 1&2)
- ▶ RUGGEDNESS TO SWITCH UP TO 60AMPS @ 500V @ RBSOA

### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	VCEO	450	Volts
Collector-Base Voltage	VCBO	1000	Volts
Emitter-Base Voltage	VEBO	9	Volts
Collector Current	IC	60	Amps
Base Current	IB	6	Amps
Total Device Dissipation @ Tc = 25 °C Derate Above 25 °C	PD	175 1	Watts W/ °C
Operating and Storage Temperature	TJ, Tstg	-65 to +200	°C

### THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case	RθJC	0.63	°C/W

### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage* (IC = 200mAdc)	BVCEO	450		Volts
Collector-Base Breakdown Voltage (IC = 200uAdc)	BVCBO	1000		Volts

Rev. 6/89 B227E

Note: Specifications subject to change without notice.

# ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit	
Emitter-Base Breakdown Voltage ( $I_E = 500 \mu\text{A}$ )	BVEBO	9	-	Vdc	
Collector Cutoff Current ( $V_{CE} = 850\text{Vdc}$ )	ICBO	-	1	$\mu\text{A}$	
Emitter Cutoff Current ( $V_{EB} = 5\text{Vdc}$ )	IEBO	-	0.1	$\mu\text{A}$	
DC Current Gain* ( $I_C = 5\text{A}$ , $V_{CE} = 5\text{V}$ ) ( $I_C = 20\text{A}$ , $V_{CE} = 5\text{V}$ ) ( $I_C = 30\text{A}$ , $V_{CE} = 5\text{V}$ )	hFE	15 10 5	- - -		
Collector-Emitter Saturation Voltage* ( $I_C = 10\text{A}$ , $I_B = 1\text{A}$ ) ( $I_C = 20\text{A}$ , $I_B = 4\text{A}$ )	VCE(SAT)	- -	0.8 1.0	Vdc	
Base-Emitter Saturation Voltage* ( $I_C = 10\text{A}$ , $I_B = 1\text{A}$ ) ( $I_C = 20\text{A}$ , $I_B = 4\text{A}$ )	VBE(SAT)	- -	1.0 1.2	Vdc	
Current Gain Bandwidth Product ( $I_C = 1\text{A}$ , $V_{CE} = 10\text{V}$ , $f = 1\text{MHz}$ )	fT	20	-	MHz	
Output Capacitance ( $V_{CB} = 10\text{V}$ , $I_E = 0\text{A}$ , $f = 1\text{MHz}$ )	Cob	-	500	pf	
Delay Time	$I_C = 10\text{A}$ $I_{B1} = 1\text{A}$ $V_{BB} = -5\text{V}$ $R_{BB} = 0.6\Omega$ $L_C = 0.25\text{mH}$ $V_{CLAMP} = 400\text{V}$	td	-	0.1	$\mu\text{s}$
Rise Time		tr	-	0.6	$\mu\text{s}$
Storage Time		ts	-	2.5	$\mu\text{s}$
Fall Time		tf	-	0.5	$\mu\text{s}$

\*Pulse Test: Pulse Width =  $300 \mu\text{s}$ , Duty Cycle = 2%

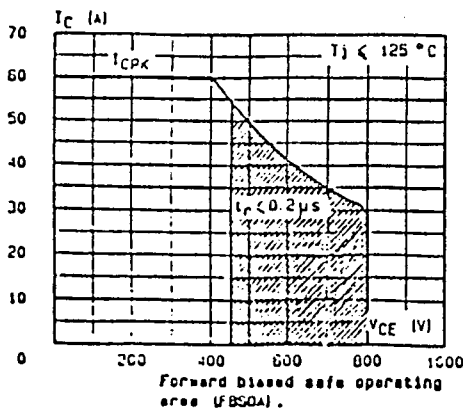


Figure 1

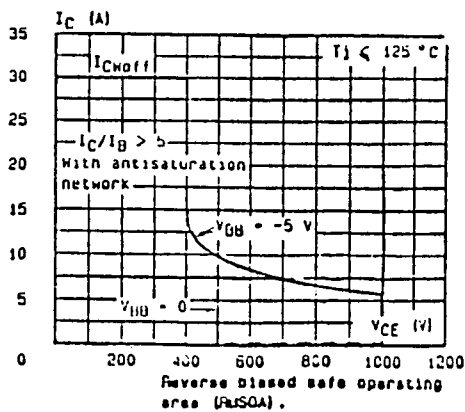


Figure 2

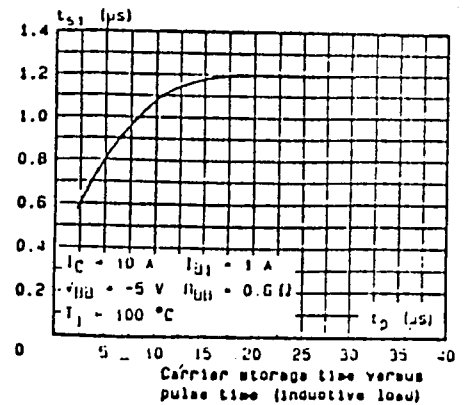


Figure 3

**SSDI**

**SOLID STATE DEVICES, INC.**

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