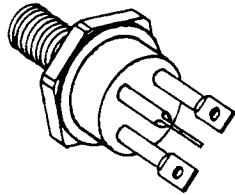


SPT6693 20 AMP HIGH VOLTAGE HIGH ENERGY NPN TRANSISTOR 400 VOLTS	SSDI 14849 FIRESTONE BLVD. LA MIRADA, CA 90638 TEL: (213) 921-9660 FAX: (213) 921-2396
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CASE STYLE "T"
 JEDEC TO-61
 ALL TERMINALS ISOLATED FROM CASE



FEATURES

- ▶ COLLECTOR BASE VOLTAGE 700V MIN
- ▶ HIGH POWER. 175 WATTS
- ▶ HIGH GAIN. LOW SATURATION
- ▶ 200 °C OPERATING TEMPERATURE
- ▶ GOLD EUTECTIC DIE ATTACH
- ▶ ISOLATED PACKAGE WITH LOW THETA
- ▶ REPLACES TRW SVT300/400 SERIES
- ▶ SUPERIOR TO RCA 2N6691, 92, 93.

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	V _{CEO}	400	Volts
Collector-Base Voltage	V _{CBO}	800	Volts
Emitter-Base Voltage	V _{EB0}	8	Volts
Collector Current	I _C	20	Amps
Base Current	I _B	7	Amps
Total Device Dissipation @ T _c = 25 °C Derate Above 25 °C	PD	175 1	Watts W/ °C
Operating and Storage Temperature	T _J , T _{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case	R _{θJC}	1.0	°C/W

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage* (I _C = 200mA _{dc})	BV _{CEO}	400		Volts
Collector-Base Breakdown Voltage (I _C = 10μA _{dc})	BV _{CBO}	700		Volts

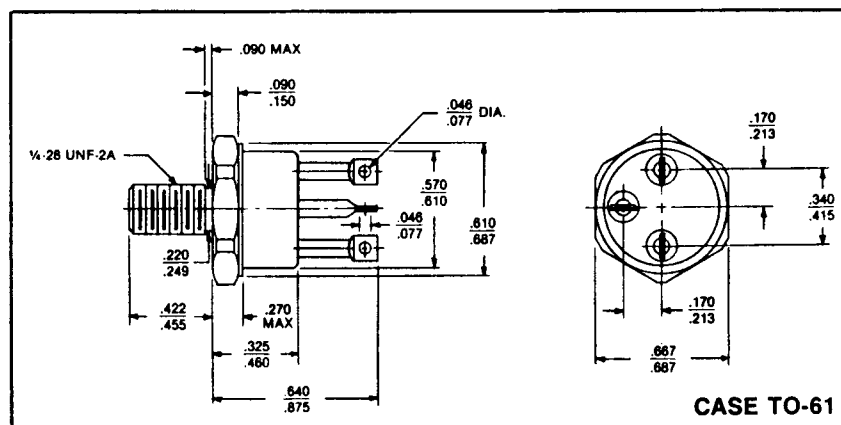
ELECTRICAL CHARACTERISTICS

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Characteristics		Symbol	Min	Max	Unit
Emitter-Base Breakdown Voltage ($I_E = 10\mu\text{A}$)		BVEBO	8		Vdc
Collector Cutoff Current ($V_{CE} = 650\text{Vdc}$, $V_{BE} = 1.5\text{V}$)		ICEV		100	μA
Emitter Cutoff Current ($V_{EB} = 6\text{Vdc}$)		IEBO		5	μA
DC Current Gain* ($I_C = 5\text{A}$, $V_{CE} = 7\text{V}$) ($I_C = 15\text{A}$, $V_{CE} = 7\text{V}$) ($I_C = 20\text{A}$, $V_{CE} = 7\text{V}$)		hFE	20 10 8		
Collector-Emitter Saturation Voltage* ($I_C = 5\text{A}$, $I_B = 1\text{A}$) ($I_C = 15\text{A}$, $I_B = 3\text{A}$)		VCE(SAT)		1.0 1.5	Vdc
Base-Emitter Saturation Voltage* ($I_C = 5\text{A}$, $I_B = 1\text{A}$) ($I_C = 15\text{A}$, $I_B = 3\text{A}$)		VBE(SAT)		1.0 1.5	Vdc
Current Gain Bandwidth Product ($I_C = 1\text{A}$, $V_{CE} = 10\text{V}$, $f = 10\text{MHz}$)		fT	20		MHz
Output Capacitance ($V_{CB} = 10\text{Vdc}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$)		Cob		500	pf
Turn On Time	(VCC = 100 Vdc, IC = 15 A, IB1 = IB2 = 3 A) VBE (off) = 6 V	ton		600	ns
Turn Off Time		toff		2.5	μs

*Pulse Test: Pulse Width = 300 μs , Duty Cycle = 2%

PHYSICAL DIMENSIONS



SSDI

SOLID STATE DEVICES, INC.

14849 Firestone Boulevard, La Mirada, CA. 90638

Telephone (213) 921-9660 ♦ FAX (213) 921-2396

SPT6693

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