Solid State Devices, Inc.
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Phone: (562) 404-7855 * Fax: (562) 404-1773
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SPT35P3

4 AMPS
60 VOLTS
DUAL NPN DARLINGTON TRANSISTOR

Designer's Data Sheet

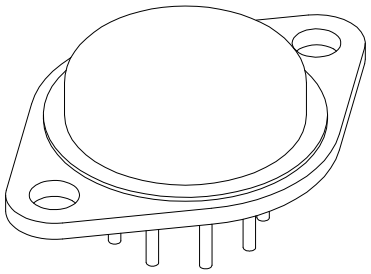
FEATURES:

- Cost-Saving Monolithic Design with Associated Commutating Diodes in A Single Package: Reduced Size, Improved Efficiency
- High Current Gain
- Low Saturation Voltage
- High Energy Capability
- Electrically Isolated Case
- Hermetically Sealed 8 Pin TO-3 Package
- High Current Replacement for PIC6006
- TX, TXV, and S-Level Screening Available. Consult Factory.

APPLICATIONS:

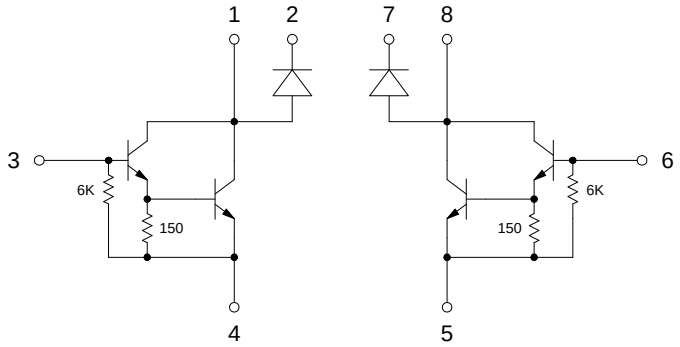
- Full Wave Bridge Circuits for Converters and Stepper-Motor Drives

TO-3, 8 Leads



MAXIMUM RATINGS		Symbol	Value	Units
Collector – Emitter Voltage		V_{CEO}	60	**Volts**
Collector – Base Voltage		V_{CBO}	60	**Volts**
Collector Current	Continuous Peak	I_C I_{CM}	4 8	**Amps**
Base Current		I_B	0.2	**Amps**
Diode Average Forward Current		I_O	2	**Amps**
Total Device Dissipation	@ $T_C = 25^oC$ Per Darlington	P_D	60 30	**Watts**
Operating and Storage Temperature		T_J & T_{stg}	-65 to +175	**^oC**
Thermal Resistance, Junction to Case	Per Device	R_{qJC}	2.5	**$^oC/W$**
	Per Transistor		5.0	

SCHEMATIC



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: TR0080D**	**DOC**

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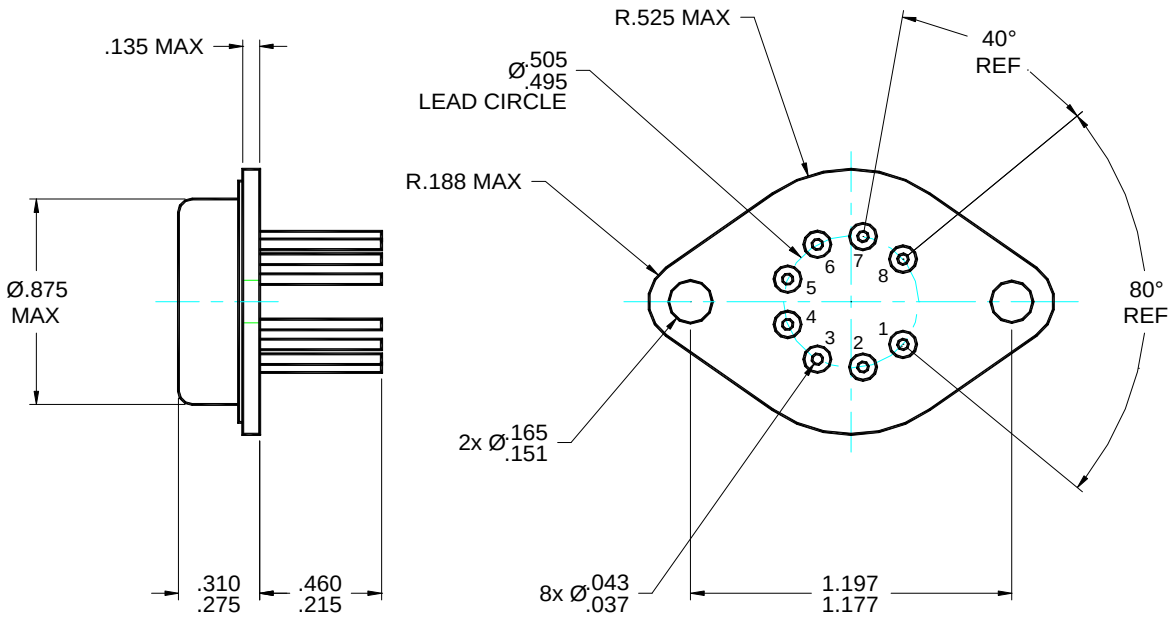
ELECTRICAL CHARACTERISTICS (Per Darlington)		Symbol	Min	Max	Unit
Collector – Emitter Sustaining Voltage * (Each Darlington)	I_C = 10 mA	BV_{CEO}	60	—	**Volts**
Collector – Base Breakdown Voltage *	I_C = 1 mA	BV_{CBO}	60	—	**Volts**
Collector Cutoff Current (V_{CE} = 40 V)	T_C = 25°C T_C = 150°C	I_{CEO}	— —	0.1 200	**mA**
Emitter Cutoff Current (V_{BE} = 5 V)		I_{EBO}		1.5	**mA**
DC Current Gain * (V_{CE} = 5 V)	I_C = 2 A, T_A = 25°C I_C = 0.4 A, T_A = -55°C	h_{FE}	2000 100	— —	
Collector – Emitter Saturation Voltage *	I_C = 2 A, I_B = 4 mA	$V_{CE(SAT)}$	—	1.5	**Volts**
Base – Emitter Saturation Voltage *	I_C = 2 A, I_B = 4 mA	$V_{BE\ (SAT)}$	—	2.0	**Volts**

Commutating Diodes (Per Darlington)		Symbol	Min	Max	Unit
Break Down Voltage	I_R = 100 µA	BV_R	60	—	**Volts**
Reverse Leakage Current	V_R = 40 V V_R = 40 V, T_C = 100°C	I_{R1} I_{R2}	— —	0.5 500	**mA** **mA**
Forward Voltage Drop	I_F = 2 A	V_F	—	1.5	**Volts**
Reverse Recovery Time	I_F = 0.5 A, I_R = 0.5 A, I_{RR} = 0.25 A	t_{RR}	—	2	**ns**

- Pulse Test: Pulse Width = 300 µsec max, Duty Cycle = 2% max

PACKAGE OUTLINE: TO-3 (8 Pins)



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