



PRELIMINARY

SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

SPT165

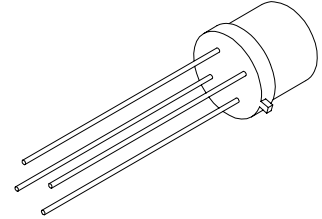
**10 mA
45 VOLTS
NPN (V_{REF}) TRANSISTOR**

DESIGNER'S DATA SHEET

FEATURES:

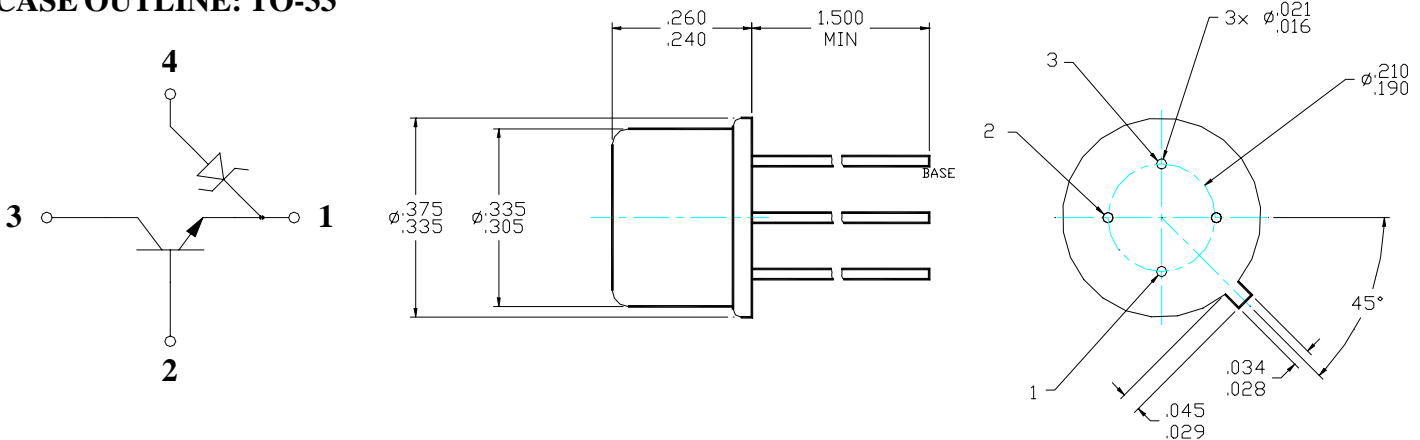
- **BV_{CEO} 45V.**
- **Very Low Leakage.**
- **High Gain.**
- **Stable Reference Voltage 0.002%/ °C from 0 to 70°C.**
- **Isolated Case.**
- **Hermetic, Metal Case with Glass Seals.**
- **150°C Operating Temperature.**

TO-33



MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage	V _{CEO}	45	Volts
Collector-Base Voltage	V _{CBO}	45	Volts
Emitter-Base Voltage	V _{EBO}	3	Volts
Collector Current, T _c ≤ 150°C	I _C	10	mAmps
Base or Zener Current, T _c ≤ 150°C	I _B , I _Z	6	mAmps
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	250 2	mW mW/°C
Operating and Storage Temperature	T _J , T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	500	°C/W

CASE OUTLINE: TO-33



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

DATA SHEET #: TR0010A

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ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage * ($I_C = 1.0\text{mA}_{DC}$)	BV_{CEO}	45	-	V
Collector Cutoff Current ($V_{CB} = 30V_{DC}$)	I_{CBO}	-	1	μA
DC Current Gain* ($I_C = 500\mu\text{A}_{DC}$, $V_{CE} = 3V_{DC}$)	H_{FE}	10	120	
Reference Voltage * ($V_{CE} = 3V_{DC}$)	V_{REF}	6.3	7.7	V_{DC}

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