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SPC-F005.DWG

REVISIONS

DOC. NO. SPC-F005 * Effective: 7/8/02 * DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1262	A	RELEASED	HO	9/5/02	JWM	9/5/02	DJC	9/6/06

Description: A PN Unijunction Transistor designed for use in pulse and timing circuits, sensing circuits, and thyristor trigger circuits.

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Intrinsic Standoff Ratio		$V_{B2B1} = 10\text{V}$, Note 3	0.56	-	0.75	-
Interbase Resistance	r_{BB}	$V_{B2B1} = 3\text{V}$, $I_E = 0$	4.7	7.0	9.1	k Ohms
Interbase Resistance Temperature Coefficient			0.1	-	0.9	%/°C
Emitter Saturation Voltage	$V_{EB1(sat)}$	$V_{B2B1} = 10\text{V}$, $I_E = 50\text{mA}$, Note 4	-	3.5	-	V
Modulated Interbase						

Features:

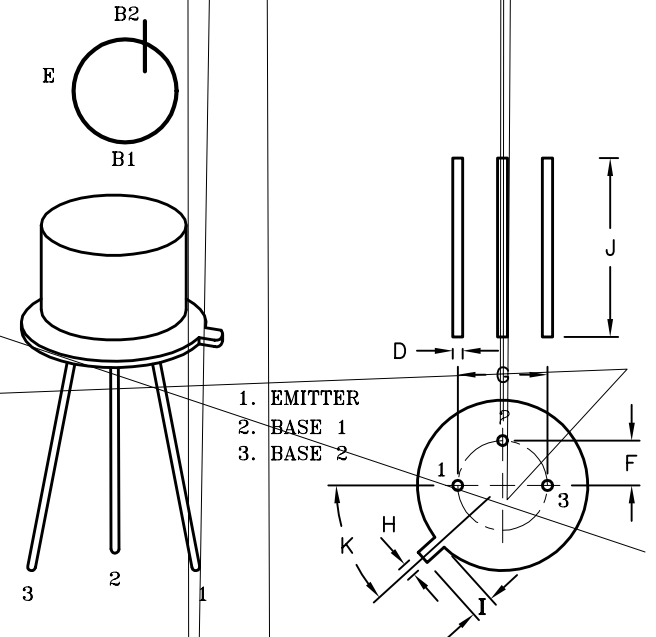
- low peak point current: 5μA (Max.)
- Low emitter reverse current: 0.005 μA (Max.)
- Passivated surface for reliability and uniformity

ABSOLUTE MAXIMUM RATINGS: ($T_A = 25^\circ\text{C}$ Unless otherwise specified)

- Power Dissipation (Note 1) P_D : 300 mW
- RMS Emitter Current $I_{E(RMS)}$: 50mA
- Peak Pulse Emitter Current (Note 2), i_E : 2 Amps
- Emitter Reverse Voltage V_{B2E} : 30 Volts
- Interbase Voltage V_{B2B1} : 35 Volts
- Operating Junction Temperature Range T_J : $-65^\circ\text{C} \sim +125^\circ\text{C}$
- Storage Temperature Range T_{stg} : $-65^\circ\text{C} \sim +150^\circ\text{C}$

Notes:

- Derate 3mW/°C increase in ambient temperature. The total power dissipation (available power to Emitter and Base-Tow) must be limited by the external circuitry.
- Capacitor discharge $-10\mu\text{F}$ or less, 30V or less.
- Intrinsic standoff ration is defined by the equation: $V_P = V_F / V_{B2B1}$
Where: V_P = peak Point Emitter Voltage; V_{B2B1} = Interbase Voltage; V_F = Emitter to Base-One Junction Diode Drop ($\sim 0.45\text{V}$ @ 10 μA)
- Use pulse techniques: Pulse Width $\sim 300\mu\text{s}$, Duty Cycle $\leq 2\%$ to avoid internal heating due to interbase modulation which may result in erroneous readings.



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1.21

DISCLAIMER:
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TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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DRAWING TITLE: Transistor, Unijunction, TO-18, PN			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	2N2646	35C0693.DWG	A
SCALE: NTS		U.O.M.: Millimeters	SHEET: 1 OF 1