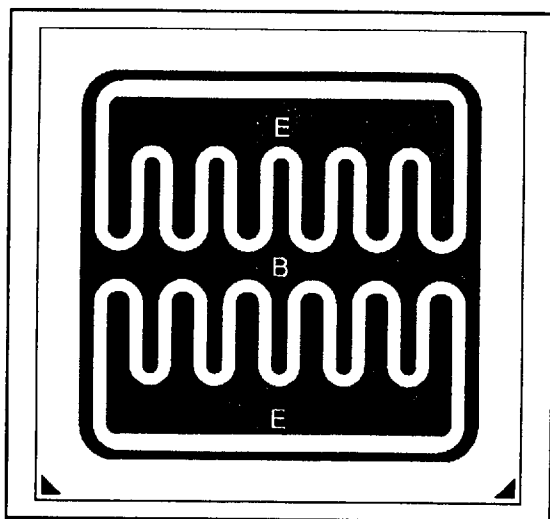


PNP Power Switching Transistor Die

Type OTC1550 120V, 10A

T-37-13



Note: Both emitters must be connected to achieve design characteristics. One 7 mil wire on each side suggested.

Applications

- Inverters
- Switching Regulators Through 50 KHz.
- Medium Current Motor Driver

Features

- PNP Planar Epitaxial Power Transistor
- Contact Metallization:
Base and Emitter: Aluminum
Collector: Alloy Gold Suitable for Eutectic Mount
- Complementary NPN Die: OTC1900
- Dimensions:
Die Size: .136 x .136 x .010 inch
Emitter Bond Area (E): .095 x .012 inch
Base Bond Area (B): .110 x .007 inch

Electrical Characteristics At 25°C

Symbol	Parameter	1550-80L		1550-80H		1550-120L		Units	Test Conditions
		Min	Max	Min	Max	Min	Max		
ICEX	Collector Cutoff		-0.1		-0.1		-0.1	mA	$V_{CE} = -90, V_{BE} = +0.5V$
ICEX	Collector Cutoff ⁽²⁾		-10		-10		-10	mA	$V_{CE} = -90, V_{BE} = +0.5V, T_j = 150^{\circ}C$
IEBO	Emitter Cutoff		-10		-10		-10	μA	$V_{EB} = -5V$
BV _{CBO}	Collector-Base	-100		-100		-100		Vdc	$I_C = -100\mu A$
BV _{CEO}	Collector-Emitter ⁽¹⁾	-80		-80		120		Vdc	$I_C = -30mA$
h _{FE}	D.C. Current Gain ⁽¹⁾	25	110	90	200	25	110		$I_C = -1A, V_{CE} = -5V$
h _{FE}	D.C. Current Gain ⁽¹⁾⁽²⁾	25		50		25			$I_C = -5A, V_{CE} = -5V$
V _{BE(SAT)}	Emitter Saturation ⁽¹⁾		1.5		1.5		1.5	Vdc	$I_C = -3A, I_B = -0.15A$
V _{CE(SAT)}	Collector Saturation ⁽¹⁾⁽²⁾		0.3		0.3		0.3	Vdc	$I_C = -3A, I_B = -0.15A$
T _{on}	$t_d + t_r$ ⁽²⁾		200		200		200	nsec	$V_C = -30V, I_C = -1A, I_{B1} = I_{B2} = 0.05A$
T _{off}	$t_s + t_f$ ⁽²⁾		900		900		900	nsec	$V_C = -30V, I_C = -1A, I_{B1} = I_{B2} = 0.05A$
COB	Output Capacitance ⁽²⁾		300		300		300	pf	$V_{CB} = -10V, f = 1MHz$
f _t	Small Signal Current Gain ⁽²⁾	10		10		10			$I_C = -500mA, V_{CE} = -5V, f = 10MHz$

(1) Pulse width 300 μsec 2% duty cycle

(2) Parameters verified on assembled devices. Data available upon request.

(3) The OTC1550 is used in Optek device types 2N5003, 2N5153, 2N6227, 2N6308, and 2N6318

Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Optek Technology, Inc. 1215 W. Crosby Road, Carrollton, Texas 75006 (214) 323-2200 TLX 323-2200 Fax (214) 323-2396