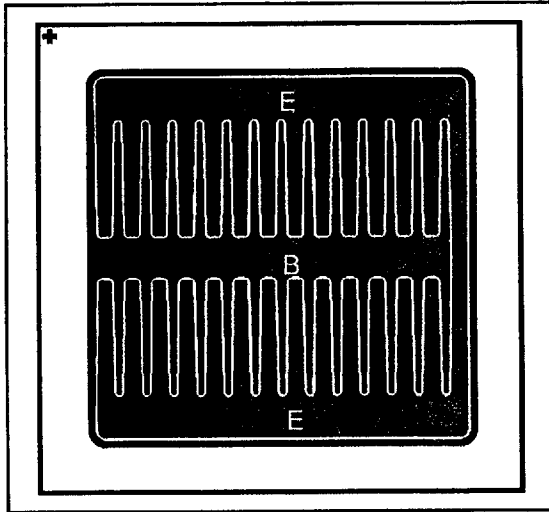


PNP Power Switching Transistor Die

Type OTC2670 100V, 30A

T-37-17



Note: Both Emitters must be connected to achieve design characteristics. Two 7 mil wires on each side suggested.

Applications

- High inductance loads as used for solenoids
- Power inverters and switching regulators through 50 KHz.

Features

- Contact Metallization
Base and Emitter: Aluminum
Collector: Alloy Gold Suitable for Eutectic Mount
- Complementary NPN Die: OTC2470-90L for PNP OTC2670-100H
- Dimensions:
Die Size: .250 x .250 x .010 inch
Emitter Bond Area (E): .185 x .020 inch
Base Bond Area (B): .185 x .020 inch

Electrical Characteristics At 25°C

Symbol	Parameter	2670-100H		2670-100L		Units	Test Conditions
		Min	Max	Min	Max		
ICEX	Collector Cutoff		-50		-50	μA	VCE = -130, VBE = +0.5V
ICEX	Collector Cutoff ⁽²⁾		-50		-50	mA	VCE = -130, VBE = +0.5V, to 150°C
IEBO	Emitter Cutoff		-50		-50	μA	VEB = -8V
VEBO	Emitter-Base	-5.0		-5.0		V	IC = -0.5mA
BVCBO	Collector-Base	-130		-160		Vdc	IC = -10mA
BVCEO	Collector-Emitter ⁽¹⁾⁽²⁾	-100		-100		Vdc	IC = -100mA
BVCEO	Collector-Emitter ⁽¹⁾	-100		-100		V	IC = -30mA
hFE	D.C. Current Gain ⁽¹⁾	35		15	45		IC = -5A, VCE = -2V
hFE	D.C. Current Gain ⁽¹⁾⁽²⁾	30	90	15	45		IC = -10A, VCE = -2V
hFE	D.C. Current Gain ⁽¹⁾⁽²⁾	20		10			IC = -20A, VCE = -2V
hFE	D.C. Current Gain ⁽¹⁾⁽²⁾	10		5			IC = -30A, VCE = -2V
VBE(SAT)	Base Saturation ⁽¹⁾⁽²⁾		-1.8		-1.8	Vdc	IC = -20A, IB = -3V
VCE(SAT)	Collector Saturation (1)(2)		-0.8		-0.8	Vdc	IC = -10A, IB = -1.0A
VCE(SAT)	Collector Saturation (1)(2)		-1.8		-1.8	Vdc	IC = -20A, IB = -3A
Ton	Turn-on Time td + tr ⁽²⁾		0.5		0.5	μsec	VC = -20V, IC = -10A, IB1 = IB2 = -0.5A
Toff	Turn-off Time ts + tf ⁽²⁾		1.5		1.5	μsec	VC = -20V, IC = -10A, IB1 = IB2 = -0.5A
COB	Output Capacitance ⁽³⁾		750		750	pf	VCB = -10V, f = 1MHz

(1) Pulse width 300 μsec 2% duty cycle

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

(3) This parameter is guaranteed by design.

(4) The OTC2670-100L is used by Optek for device types 2N5738 and 2N5745, OTC2670-100H for types 2N5678, 2N5742 and 2N5853

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

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