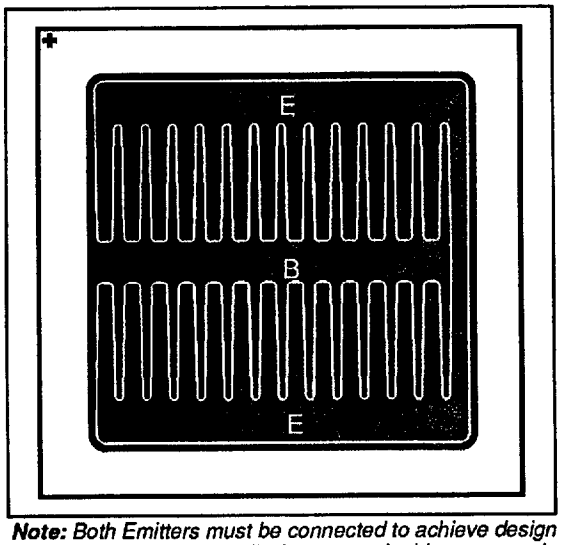
Product Bulletin OTC2670
August 1990

T-37-17

PNP Power Switching Transistor Die
Type OTC2670 100V, 30A



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		
I_{CEX}	Collector Cutoff		-50		-50	µA	V_{CE} = -130, V_{BE} = +0.5V
I_{CEX}	Collector Cutoff (2)		-50		-50	mA	V_{CE} = -130, V_{BE} = +0.5V, to 150°C
I_{EBO}	Emitter Cutoff		-50		-50	µA	V_{EB} = -8V
V_{EBO}	Emitter-Base	-5.0		-5.0		V	I_C = -0.5mA
BV_{CBO}	Collector-Base	-130		-160		Vdc	I_C = -10mA
BV_{CEO}	Collector-Emitter (1)(2)	-100		-100		Vdc	I_C = -100mA
BV_{CEO}	Collector-Emitter (1)	-100		-100		V	I_C = -30mA
h_{FE}	D.C. Current Gain (1)	35		15	45		I_C = -5A, V_{CE} = -2V
h_{FE}	D.C. Current Gain (1)(2)	30	90	15	45		I_C = -10A, V_{CE} = -2V
h_{FE}	D.C. Current Gain (1)(2)	20		10			I_C = -20A, V_{CE} = -2V
h_{FE}	D.C. Current Gain (1)(2)	10		5			I_C = -30A, V_{CE} = -2V
$V_{BE(SAT)}$	Base Saturation (1)(2)		-1.8		-1.8	Vdc	I_C = -20A, I_B = -3V
$V_{CE(SAT)}$	Collector Saturation (1)(2)		-0.8		-0.8	Vdc	I_C = -10A, I_B = -1.0A
$V_{CE(SAT)}$	Collector Saturation (1)(2)		-1.8		-1.8	Vdc	I_C = -20A, I_B = -3A
Ton	Turn-on Time td + tr (2)		0.5		0.5	µsec	V_C = -20V, I_C = -10A, I_{B1} = I_{B2} = -0.5A
Toff	Turn-off Time ts + tf (2)		1.5		1.5	µsec	V_C = -20V, I_C = -10A, I_{B1} = I_{B2} = -0.5A
C_{OB}	Output Capacitance (3)		750		750	pf	V_{CB} = -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 garanteed 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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