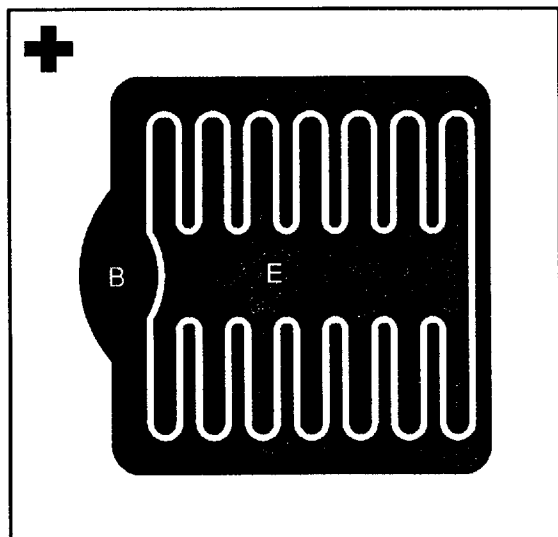


# High Speed NPN Switching Transistor Die

## Type OTC2420 80V, 5A



### Applications

- Low Voltage Inverters
- Pulse Amplifiers
- Base Drive Circuits

### Features

- NPN Epitaxial Planar Power Transistor
- Contact Metallization  
Base and Emitter: Aluminum  
Collector: Alloy Gold Suitable for Eutectic Mount
- Complementary PNP Die: OTC2220
- Gold diffused for faster switching speed
- Dimensions:  
Die Size: .085 x .085 x .010 inch  
Emitter Bond Area (E): .045 x .012 inch  
Base Bond Area (B): .020 x .011 inch

### Electrical Characteristics At 25°C

Symbol	Parameter	2420-80L		2420-60L		2420-80H		2420-60H		Units	Test Conditions
		Min	Max	Min	Max	Min	Max	Min	Max		
I <sub>CBO</sub>	Collector Cutoff		200		200		200		200	nA	V <sub>CB</sub> = 100V
I <sub>CBO</sub>	Collector Cutoff		150		150		150		150	nA	V <sub>CB</sub> = 80V
I <sub>CBO</sub>	Collector Cutoff		100		100		100		100	nA	V <sub>CB</sub> = 60V
I <sub>CES</sub>	Collector-Emitter		100		200		100		200	nA	V <sub>CE</sub> = 60V
I <sub>EBO</sub>	Emitter Cutoff		100		100		100		100	nA	V <sub>EB</sub> = 3V
BV <sub>CBO</sub>	Collector-Base	120		100		120		100		V	I <sub>C</sub> = 100μA
BV <sub>CEO</sub>	Collector-Emitter	80		60		80		60		V	I <sub>C</sub> = 50μA
BV <sub>EBO</sub>	Emitter-Base	6		6		6		6		V	I <sub>E</sub> = 10μA
h <sub>FE</sub>	D.C. Current Gain <sup>(2)</sup> <sup>(1)(2)</sup>	50	150	50	150	125	250	125	250		I <sub>C</sub> = 1A V <sub>CE</sub> = 2V Pulsed
		10		10		15		15			I <sub>C</sub> = 5A V <sub>CE</sub> = 2V Pulsed
V <sub>BE(sat)</sub>	Base Saturation <sup>(1)(2)</sup>		1.5		1.5		1.5		1.5	V	I <sub>C</sub> = 5A I <sub>B</sub> = 500mA
V <sub>CE(sat)</sub>	Collector Saturation <sup>(1)</sup>		1		1		1		1	V	I <sub>C</sub> = 5A I <sub>B</sub> = 500mA
t <sub>d+tr</sub>	Turn On <sup>(1)</sup>		140		140		140		140	ns	I <sub>C</sub> = 1A
t <sub>s</sub>	Storage Time <sup>(1)</sup>		400		400		500		500	ns	I <sub>B1</sub> = I <sub>B2</sub> = 20mA
t <sub>f</sub>	Fall Time <sup>(1)</sup>		100		100		100		100	ns	V <sub>CC</sub> = 30V P <sub>W</sub> = 10μs
C <sub>OB</sub>	Output Capacitance <sup>(1)</sup>		100		100		100		100	pF	V <sub>CB</sub> = 10V
f <sub>t</sub>	Gain Bandwidth <sup>(1)</sup>	80		80		80		80		MHz	I <sub>C</sub> = 500mA V <sub>CE</sub> = 5V

(1) These parameters are verified in a TO-5 package. Data available upon request.

(2) Pulse width 300 μsec 2% duty cycle.

(3) The OTC2420 is used in Optek device types 2N4305-2N4311, 2N5326, SVT60-5, and SVT80-5

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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