

COMPLEMENTARY SILICON POWER TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES
- FULLY MOLDED ISOLATED PACKAGE
- 2000 V DC ISOLATION(U.L. COMPLIANT)

APPLICATIONS

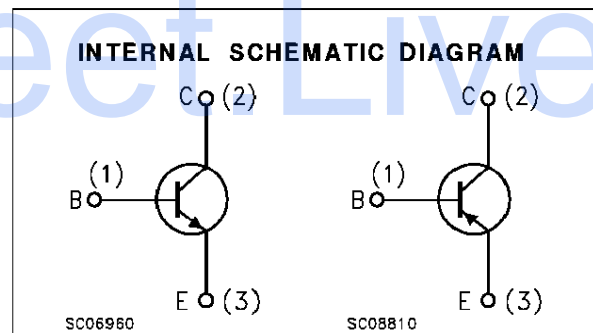
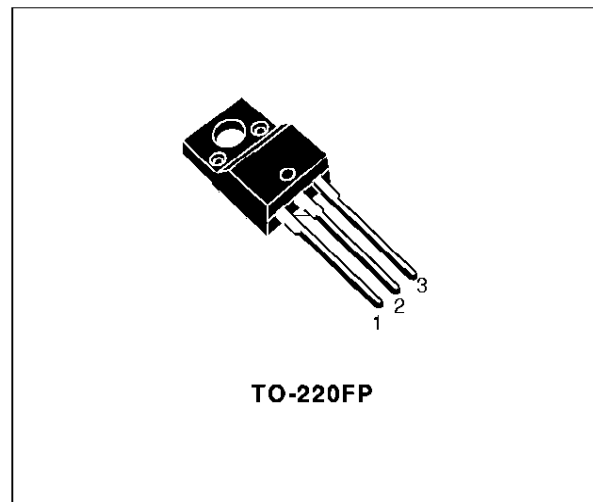
- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIERS

DESCRIPTION

The BD241BFP is silicon epitaxial-base NPN transistors mounted in TO-220FP fully molded isolated package.

It is intended for power linear and switching applications.

The complementary PNP types is the BD242BFP.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	PNP	
V_{CER}	Collector-Base Voltage ($R_{BE} = 100 \Omega$)	BD241BFP		V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	BD242BFP		
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)			V
I_C	Collector Current			A
I_{CM}	Collector Peak Current			A
I_B	Base Current			A
P_{tot}	Total Dissipation at $T_c \leq 25^\circ C$			W
T_{sig}	Storage Temperature			$^\circ C$
T_j	Max. Operating Junction Temperature			$^\circ C$

For PNP types voltage and current values are negative.

BD241BFP / BD242BFP

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	5.3	$^{\circ}C/W$
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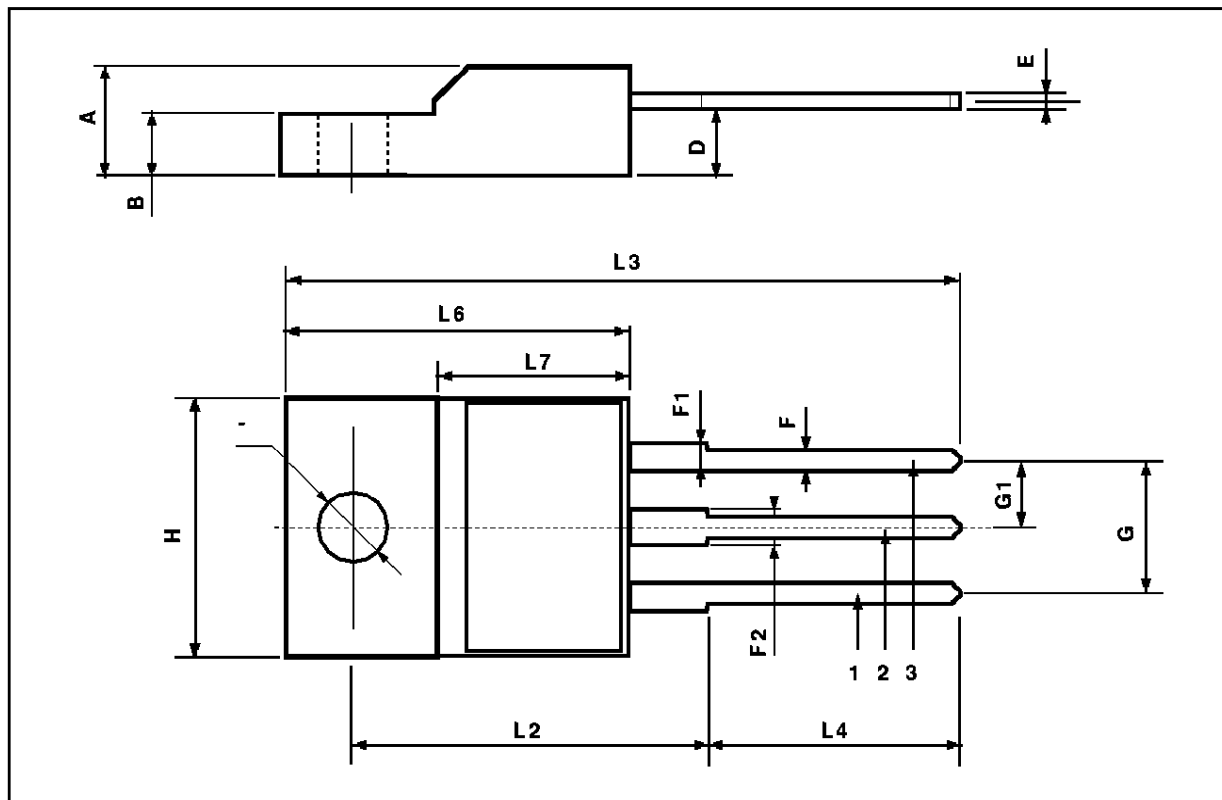
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = 60 V$			0.3	mA
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = 80 V$			0.2	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5 V$			1	mA
$V_{CEO(sus)*}$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 30 mA$	80			V
$V_{CE(sat)*}$	Collector-Emitter Saturation Voltage	$I_C = 3 A$ $I_B = 0.6 A$			1.2	V
$V_{BE(ON)*}$	Base-Emitter Voltage	$I_C = 3 A$ $V_{CE} = 4 V$			1.8	V
h_{FE*}	DC Current Gain	$I_C = 1 A$ $V_{CE} = 4 V$ $I_C = 3 A$ $V_{CE} = 4 V$	25 10			

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 2\%$
For PNP types voltage and current values are negative.

TO-220FP MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.4		4.6	0.173		0.181
B	2.5		2.7	0.098		0.106
D	2.5		2.75	0.098		0.108
E	0.45		0.7	0.017		0.027
F	0.75		1	0.030		0.039
F1	1.15		1.7	0.045		0.067
F2	1.15		1.7	0.045		0.067
G	4.95		5.2	0.195		0.204
G1	2.4		2.7	0.094		0.106
H	10		10.4	0.393		0.409
L2		16			0.630	
L3	28.6		30.6	1.126		1.204
L4	9.8		10.6	0.385		0.417
L6	15.9		16.4	0.626		0.645
L7	9		9.3	0.354		0.366
Ø	3		3.2	0.118		0.126



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