



A Product Line of Diodes Incorporated



70V PNP MEDIUM POWER TRANSISTOR IN SOT223

Features

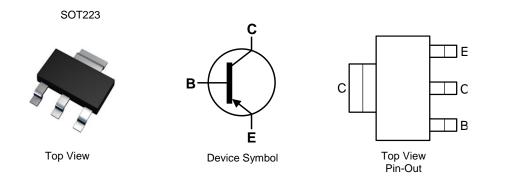
- BV_{CEO} > -70V
- I_C = -2A High Continuous Current
- Low Saturation Voltage V_{CE(sat)} < -500mV @ -1A
- Complementary NPN Type: FZT692B
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

- Case: SOT223
- Case Material: Molded Plastic. "Green" Molding Compound; UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 (3)
- Weight: 0.112 grams (Approximate)

Applications

Battery Powered Circuits



Ordering Information (Note 4)

ProductComplianceMarkingReel size (inches)Tape width (mm)Quantity per reelFZT792ATAAEC-Q101FZT792A7121,000						
FZT792ATA AEC-Q101 FZT792A 7 12 1,000	Product	Compliance	Marking		Tape width (mm)	Quantity per reel
	FZT792ATA	AEC-Q101		7	12	1,000

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.

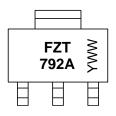
2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. For packaging details, go to our website at http"//www.diodes.com/products/packages.html.

Marking Information





FZT 792A = Product Type Marking Code YWW = Date Code Marking Y or \overline{Y} = Last Digit of Year (ex: 5= 2015) WW or $\overline{W}W$ = Week Code (01~53)





Absolute Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-75	V
Collector-Emitter Voltage	V _{CEO}	-70	V
Emitter-Base Voltage	V _{EBO}	-7	V
Continuous Collector Current	Ic	-2	A
Peak Pulse Current	I _{CM}	-5	A

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit		
	(Note 5)		3.0		
Dower Dissinction	(Note 6)		2.0	w	
Power Dissipation	(Note 7)	PD	1.6	vv	
	(Note 8)		1.2	7	
	(Note 5)		41.7		
Thermal Desistance, Junction to Ambient	(Note 6)	$R_{ extsf{ heta}JA}$	62.5		
Thermal Resistance, Junction to Ambient	(Note 7)		78.1	°C/W	
	(Note 8)		104		
Thermal Resistance Junction to Lead	(Note 9)	R _{θJL}	12.9		
Operating and Storage Temperature Range		T _{J,} T _{STG}	-55 to +150	°C	

ESD Ratings (Note 10)

Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge - Human Body Model	ESD HBM	4,000	V	ЗA
Electrostatic Discharge - Machine Model	ESD MM	400	V	С

Notes: 5. For a device mounted with the collector lead on 50mm x 50mm 2oz copper that is on a single-sided 1.6mm FR4 PCB; device is measured under still air conditions whilst operating in a steady-state.

6. Same as Note 5, except the device is mounted on 25mm x 25mm 2oz copper.

7. Same as Note 5, except the device is mounted on 25mm x 25mm 1oz copper.

8. Same as Note 5, except the device is mounted on minimum recommended pad layout.

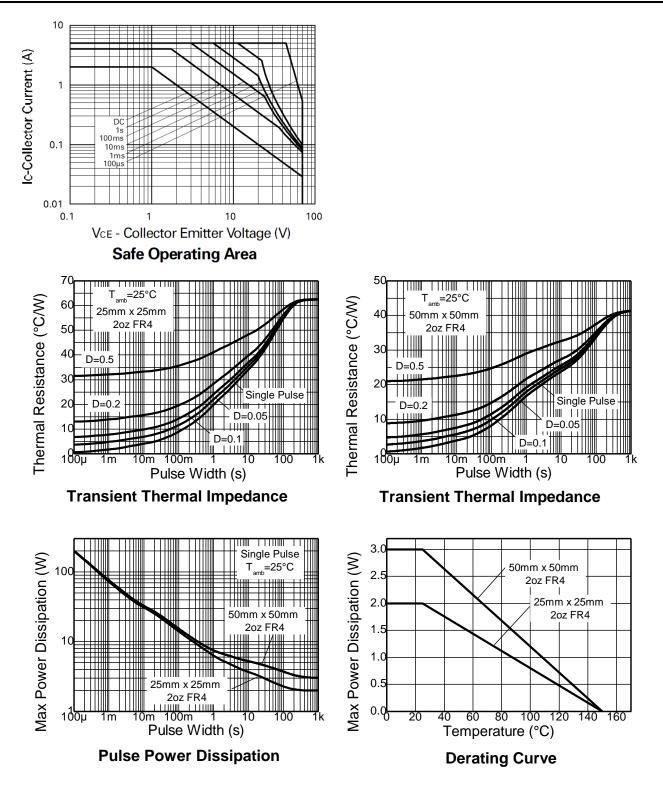
9. Thermal resistance from junction to solder-point (at the end of the collector lead).

10. Refer to JEDEC specification JESD22-A114 and JESD22-A115.





Thermal Characteristics and Derating Information







Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

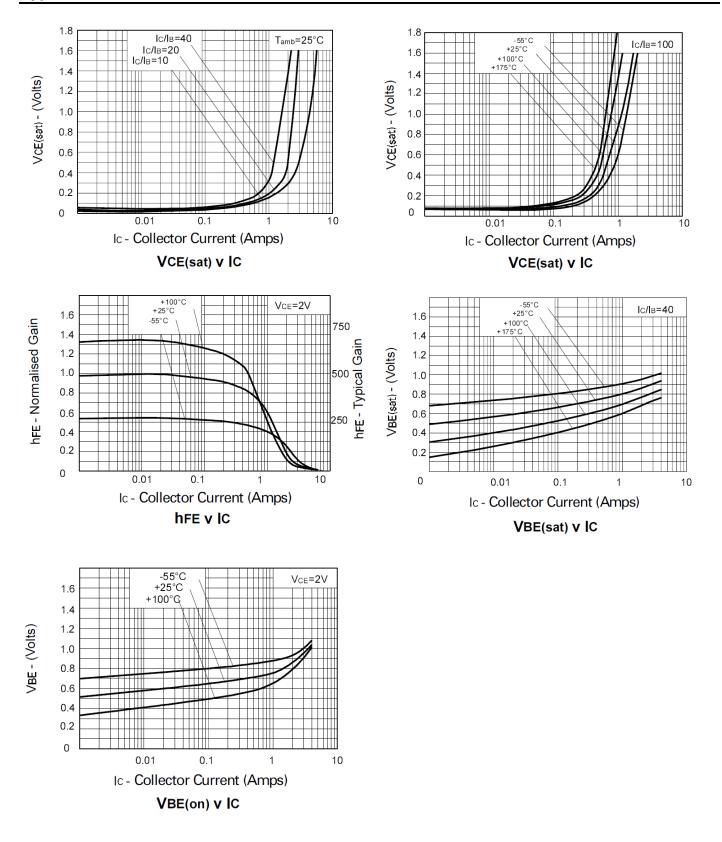
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV _{CBO}	-75	-100	-	V	I _C = -100μA
Collector-Emitter Breakdown Voltage (Note 11)	BV _{CEO}	-70	-90	-	V	I _C = -10mA
Emitter-Base Breakdown Voltage	BV _{EBO}	-7	-8.5	-	V	I _E = -100μA
Collector Cut-Off Current	I	-	<1	-100	nA	$V_{CB} = -40V$
	I _{CBO}	-	-	-10	μA	$V_{CB} = -40V, T_{amb} = +100^{\circ}C$
Emitter Cut-Off Current	I _{EBO}	-	<1	-100	nA	$V_{EB} = -4V$
	V _{CE(sat)}	-	-0.30	-0.45	v	$I_{\rm C} = -500 {\rm mA}, I_{\rm B} = -5 {\rm mA}$
Collector-Emitter Saturation Voltage (Note 11)			-0.30	-0.50		I _C = -1A, I _B = -25mA
		-	-0.30	-0.50		I _C = -2A, I _B = -200mA
Base-Emitter Saturation Voltage (Note 11)	V _{BE(sat)}	-	-0.80	-0.95	V	I _C = -1A, I _B = -25mA
Base-Emitter Turn-On Voltage (Note 11)	V _{BE(on)}	-	-0.75	-	V	$I_{C} = -1A, V_{CE} = -2V$
		300	-	800		$I_{C} = -10 \text{mA}, V_{CE} = -2 \text{V}$
DC Current Gain (Note 11)	h _{FE}	250	-	-	_	$I_{C} = -500 \text{mA}, V_{CE} = -2 \text{V}$
		200	-	-		$I_{C} = -1A, V_{CE} = -2V$
Current Gain-Bandwidth Product	fT	100	160	-	MHz	$V_{CE} = -5V$, $I_C = -50mA$ f = 50MHz
Turn-On Time	t _{on}	-	35	-	ns	$V_{CC} = -10V, I_{C} = -500mA$
Turn-Off Time	t _{off}	-	750	-	ns	$I_{B1} = I_{B2} = -50 \text{mA}$
Input Capacitance	Cibo	-	225	-	pF	V _{EB} = -0.5V, f = 1MHz
Output Capacitance	C _{obo}	_	25	-	pF	$V_{CB} = -10V, f = 1MHz$

11. Measured under pulsed conditions. Pulse width \leq 300µs. Duty cycle \leq 2%. Note:





Typical Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

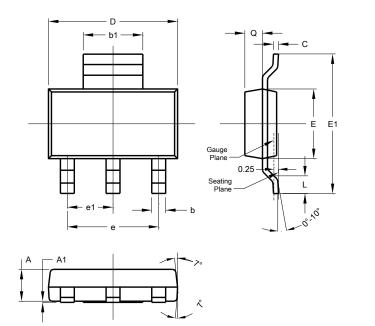






Package Outline Dimensions

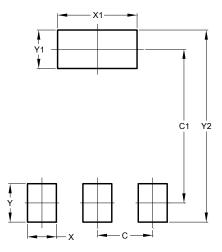
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



SOT223					
Dim	Min	Max	Тур		
Α	1.55	1.65	1.60		
A1	0.010	0.15	0.05		
b	0.60	0.80	0.70		
b1	2.90	3.10	3.00		
С	0.20	0.30	0.25		
D	6.45	6.55	6.50		
ш	3.45	3.55	3.50		
E1	6.90	7.10	7.00		
е	-	-	4.60		
e1	-	-	2.30		
L	0.85	1.05	0.95		
Q	0.84	0.94	0.89		
All Dimensions in mm					

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
С	2.30
C1	6.40
Х	1.20
X1	3.30
Y	1.60
Y1	1.60
Y2	8.00





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