ZTX792ASTOA Datasheet

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DiGi Electronics Part Number	ZTX792ASTOA-DG
Manufacturer	Diodes Incorporated
Manufacturer Product Number	ZTX792ASTOA
Description	TRANS PNP 70V 2A E-LINE
Detailed Description	Bipolar (BJT) Transistor PNP 70 V 2 A 100MHz 1 W Through Hole E-Line (TO-92 compatible)

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
ZTX792ASTOA	Diodes Incorporated
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP	2 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
70 V	500mV @ 200mA, 2A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	300 @ 10mA, 2V
Power - Max:	Frequency - Transition:
1 W	100MHz
Operating Temperature:	Mounting Type:
-55°C ~ 200°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
E-Line-3, Formed Leads	E-Line (TO-92 compatible)
Base Product Number:	
ZTX792A	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.29.0075	

PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

ZTX792A

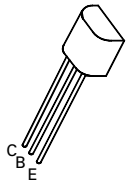
ISSUE 2 – APRIL 94

FEATURES

* 70 Volt V_{CEO}
* Gain of 400 at I_C=3 Amps
* Very low saturation voltage

APPLICATIONS

* Darlington replacement
* Flash gun convertors
* Battery powered circuits
* Motor drivers



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-75	V
Collector-Emitter Voltage	V_{CEO}	-70	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-4	A
Continuous Collector Current	I_C	-2	A
Practical Power Dissipation*	P_{totp}	1.5	W
Power Dissipation at T_{amb}=25°C derate above 25°C	P_{tot}	1 5.7	W mW/°C
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +200	°C

*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 1 inch square minimum

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-75			V	I_C=-100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-70			V	I_C=-10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	I_E=-100μA
Collector Cut-Off Current	I_{CBO}			-0.1	μA	V_{CB}=-40V
Emitter Cut-Off Current	I_{EBO}			-0.1	μA	V_{EB}=-4V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.45 -0.5 -0.5	V V V	I_C=-500mA, I_B=-5mA* I_C=-1A, I_B=-25mA* I_C=-2A, I_B=-200mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.95	V	I_C=-1A, I_B=-25mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.75		V	IC=-1A, V_{CE}=-2V*
Static Forward Current Transfer	h_{FE}	300 250 200		800		I_C=-10mA, V_{CE}=-2V* I_C=-500mA, V_{CE}=-2V* I_C=-1A, V_{CE}=-2V*

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

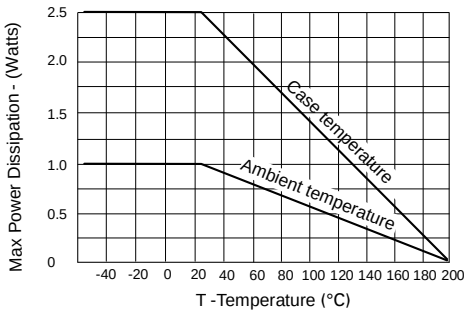
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Transition Frequency	f_T	100			MHz	I_C=-50mA, V_{CE}=-5V f=50MHz
Input Capacitance	C_{ibo}		225		pF	V_{EB}=-0.5V, f=1MHz
Output Capacitance	C_{obo}		22		pF	V_{CB}=-10V, f=1MHz
Switching Times	t_{on} t_{off}		35 750		ns ns	I_C=-500mA, I_{B1}=-50mA I_{B2}=-50mA, V_{CC}=-10V

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%

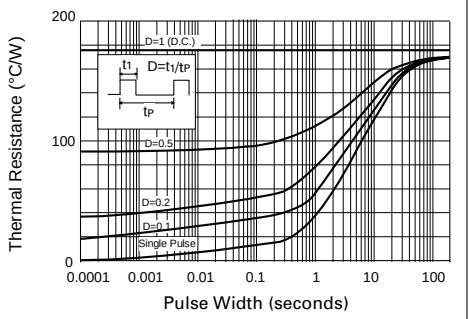
THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance: Junction to Ambient$_1$	$R_{th(j\text{-}amb)1}$	175	°C/W
Junction to Ambient$_2$	$R_{th(j\text{-}amb)2}$†	116	°C/W
Junction to Case	$R_{th(j\text{-}case)}$	70	°C/W

† Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.



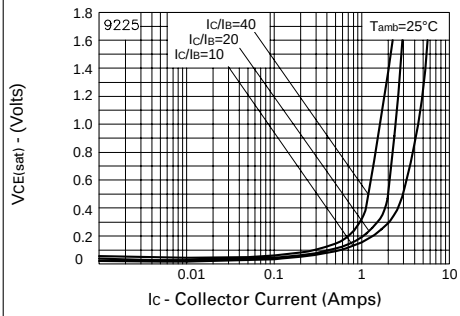
Derating curve



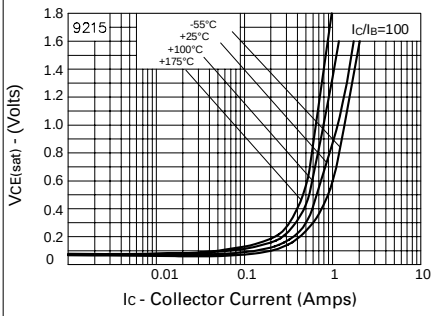
Maximum transient thermal impedance

ZTX792A

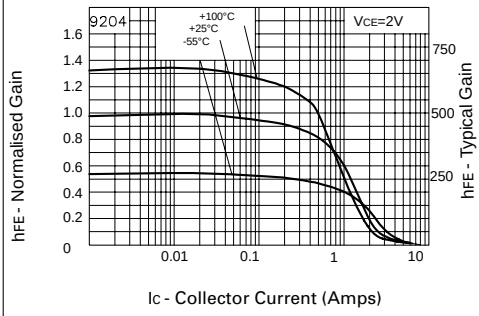
TYPICAL CHARACTERISTICS



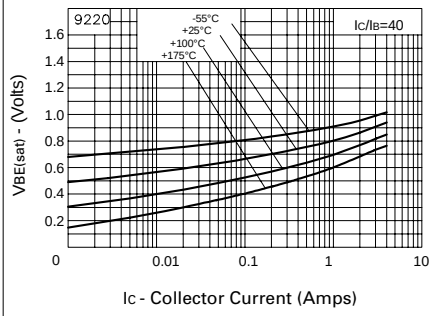
VCE(sat) v IC



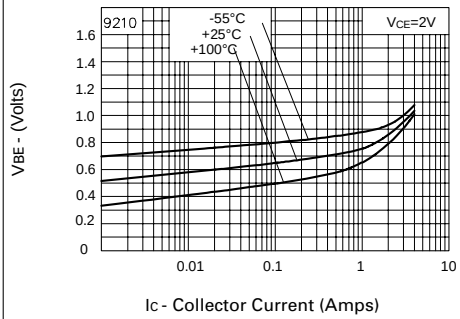
VCE(sat) v IC



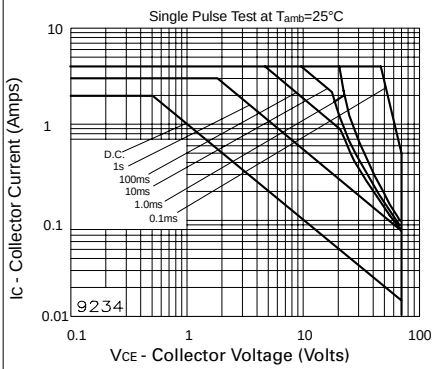
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area

OUR CERTIFICATE

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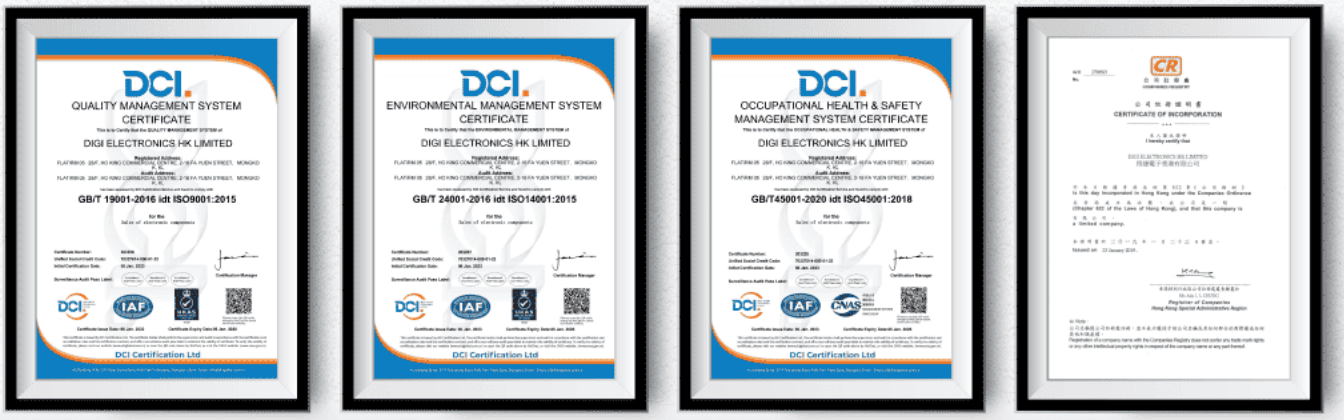

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