

FMMT497TC Datasheet



DiGi Electronics Part Number	FMMT497TC-DG
Manufacturer	Diodes Incorporated
Manufacturer Product Number	FMMT497TC
Description	TRANS NPN 300V 0.5A SOT23-3
Detailed Description	Bipolar (BJT) Transistor NPN 300 V 500 mA 75MHz 5 00 mW Surface Mount SOT-23-3

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
FMMT497TC	Diodes Incorporated
Series:	Product Status:
	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	500 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ lb, lc:
300 V	300mV @ 25mA, 250mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA	80 @ 100mA, 10V
Power - Max:	Frequency - Transition:
500 mW	75MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
TO-236-3, SC-59, SOT-23-3	SOT-23-3
Base Product Number:	
FMMT497	

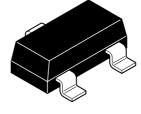
Environmental & Export classification

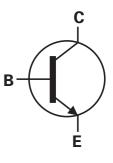
RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
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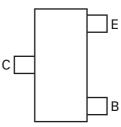


FMMT497 SOT23 NPN silicon planar high voltage high performance transistor

Complementary part number - FMMT597 Device marking - 497







Pinout - top view

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Collector-base voltage	V _{CBO}	300	V
Collector-emitter voltage	V _{CEO}	300	V
Emitter-base voltage	V _{EBO}	5	V
Continuous collector current	۱ _C	500	mA
Peak pulse current	I _{СМ}	1	А
Base current	Ι _Β	200	mA
Power dissipation at T _{amb} =25°C	P _{tot}	500	mW
Operating and storage temperature range	T _j :T _{stg}	-55 to +150	°C

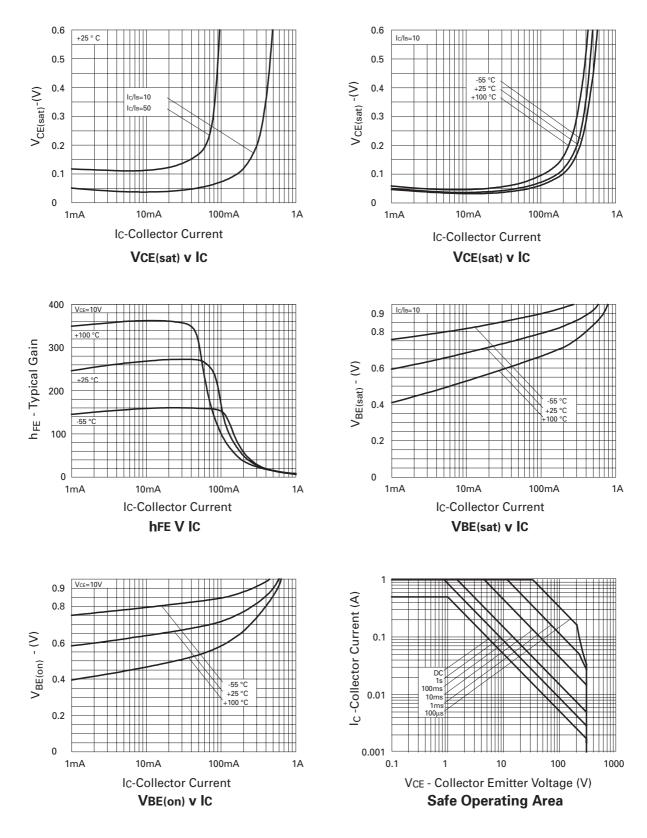
Parameter	Symbol	Min.	Тур.	Мах	Unit	Conditions
Collector-base breakdown voltage	V _{(BR)CBO}	300		•	V	I _C = 100μA
Collector-emitter breakdown voltage	V _{CEO(sus)}	300			V	I _C = 10mA ^(*)
Emitter-base breakdown voltage	V _{(BR)EBO}	5			V	I _E = 100μA
Collector cut-off current	I _{CBO}			100	nA	V _{CB} = 250V
Collector cut-off current	I _{CES}			100	nA	V _{CES} = 250V
Emitter cut-off current	I _{EBO}			100	nA	$V_{EB} = 4V$
Collector-emitter saturation voltage	V _{CE(sat)}			0.2 0.3	V V	l _C = 100mA, l _B = 10mA l _C = 250mA, l _B = 25mA
Base-emitter saturation voltage	V _{BE(sat)}			1.0	V	l _C = 250mA, l _B = 25mA
Base-emitter turn on voltage	V _{BE(on)}			1.0	V	I _C = 250mA, V _{CE} = 10V
Static forward current transfer ratio	h _{FE}	100 80 20		300		$I_{C} = 1mA, V_{CE} = 10V$ $I_{C} = 100mA, V_{CE} = 10V^{(*)}$ $I_{C} = 250mA, V_{CE} = 10V^{(*)}$
Transition frequency	f _T	75			MHz	l _C = 50mA, V _{CE} = 10V f = 100MHz
output capacitance	C _{obo}			5	pF	V _{CB} = 10V, f = 1MHz
Switching performance	td		53		ns	V _{CC} = 100V, I _C = 100mA,
	tr		126		ns	lb1 = -lb2 = 10mA
	ts		2.58		μs]
	tf		228		ns	

Electrical characteristics (at T_{amb} = 25°C unless otherwise stated)

NOTES:

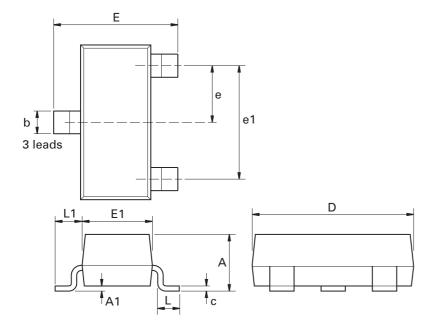
(*) Measured under pulsed conditions. Pulse width = 300 $\mu s.$ Duty cycle ${\leq}2\%.$





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Package outline - SOT23



Dim.	Millin	Millimeters Inches Dim		Dim.	Millimeters		Inches		
	Min.	Max.	Min.	Max.		Min.	Max.	Max.	Max.
А	-	1.12	-	0.044	e1	1.90	NOM	0.075	NOM
A1	0.01	0.10	0.0004	0.004	E	2.10	2.64	0.083	0.104
b	0.30	0.50	0.012	0.020	E1	1.20	1.40	0.047	0.055
С	0.085	0.120	0.003	0.008	L	0.25	0.62	0.018	0.024
D	2.80	3.04	0.110	0.120	L1	0.45	0.62	0.018	0.024
е	0.95	NOM	0.0375	5 NOM	-	-	-	-	-

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches

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"Not recommended for new designs"	Device is still in production to support existing designs and production
"Obsolete"	Production has been discontinued
Datasheet status key:	
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