



BC 413 BC 414 BC 415 BC 416

COMPLEMENTARY SILICON AF LOW NOISE SMALL SIGNAL TRANSISTORS

CASE TO-92F



THE BC413, BC414, BC415, BC416 ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR AF LOW NOISE PREAMPLIFIER APPLICATIONS, THE BC413, BC414 ARE NPN AND ARE COMPLEMENTARY TO THE PNP BC415, BC416 RESPECTIVELY.

ABSOLUTE MAXIMUM RATINGS

For p-n-p devices, voltage and current values are negative.

		BC413 (NPN)	BC414 (NPN)	BC415 (PNP)	BC416 (PNP)
Collector-Base Voltage	V _{CB0}	45V	50V	45V	50V
Collector-Emitter Voltage	V _{CE0}	30V	45V	35V	45V
Emitter-Base Voltage	V _{EB0}			5V	
Collector Current	I _C		100mA		
Total Power Dissipation @ T _A ≤ 25°C	P _{tot}		300mW		
		derate 2.4mW/°C above 25°C			
Operating Junction & Storage Temperature	T _j , T _{stg}	-55 to 150°C			

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV _{CB0}					I _C =10μA I _E =0
BC413		45			V	
BC414		50			V	
BC415		45			V	
BC416		50			V	
Collector-Emitter Breakdown Voltage	LV _{CE0}					I _C =10mA (Pulsed) I _B =0
BC413		30			V	
BC414		45			V	
BC415		35			V	
BC416		45			V	
Emitter-Base Breakdown Voltage	BV _{EB0}	5			V	I _E =10μA I _C =0
Collector Cutoff Current	I _{CBO}			15	nA	V _{CB} =30V I _E =0
				5	μA	V _{CB} =30V I _E =0 T _A =150°C
Emitter Cutoff Current	I _{EB0}			15	nA	V _{EB} =4V I _C =0
Collector-Emitter Saturation Voltage	V _{CE(sat)}	0.08	0.25		V	I _C =10mA I _B =0.5mA
		0.25	0.6		V	I _C =100mA I _B =5mA (Pulsed)

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