

MMCF708 (SILICON)

MMCF2369

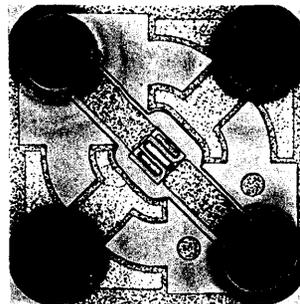
MMCF3227

FLIP-CHIP NPN SWITCH AND AMPLIFIER TRANSISTORS

Flip-Chip – NPN silicon Annular transistor family for low-current, high-speed switching applications similar to the 2N708, 2N2369 and 2N3227.

Primary Electrical Features:

- High speed switching characteristics similar to 2N2369.



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MAXIMUM RATINGS

Rating	Symbol	MMCF708	MMCF2369	MMCF3227	Unit
Collector-Emitter Voltage	V_{CEO}	15	15	20	Vdc
Collector-Emitter Voltage	V_{CES}	—	40	40	Vdc
Collector-Base Voltage	V_{CB}	← 40 →			Vdc
Emitter-Base Voltage	V_{EB}	5.0	4.5	6.0	Vdc
Collector Current – Peak (10 μ s pulse)	I_C	← 500 →			mAdc

MMCF708, MMCF2369, MMCF3227 (continued)

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I _C = 10 mA, I _B = 0)	BV _{CEO}	15 20	—	V _{dc}
MMCF708, MMCF2369 MMCF3227				
Collector-Emitter Breakdown Voltage (I _C = 10 μA, V _{BE} = 0)	BV _{CES}	40	—	V _{dc}
MMCF2369, MMCF3227				
Collector-Base Breakdown Voltage (I _C = 10 μA, I _E = 0)	BV _{CBO}	40	—	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 10 μA, I _C = 0)	BV _{EBO}	5.0 4.5 6.0	— — —	V _{dc}
MMCF708 MMCF2369 MMCF3227				
Collector Cutoff Current (V _{CB} = 20 V, I _E = 0)	I _{CBO}	— — —	0.025 0.4 0.2	μA
MMCF708 MMCF2369 MMCF3227				
ON CHARACTERISTICS				
DC Current Gain (I _C = 0.5 mA, V _{CE} = 1.0 V)	h _{FE}	15	—	—
MMCF708				
(I _C = 10 mA, V _{CE} = 1.0 V)		30 40 100	150 150 300	
MMCF708 MMCF2369 MMCF3227				
(I _C = 100 mA, V _{CE} = 1.0 V)		15 30	— —	
MMCF2369 MMCF3227				
Collector-Emitter Saturation Voltage (I _C = 10 mA, I _B = 1.0 mA)	V _{CE(sat)}	— —	0.4 0.25	V _{dc}
MMCF708 MMCF2369, MMCF3227				
Base-Emitter Saturation Voltage (I _C = 10 mA, I _B = 1.0 mA)	V _{BE(sat)}	— —	0.8 0.85	V _{dc}
MMCF708 MMCF2369, MMCF3227				
DYNAMIC CHARACTERISTICS				
Current-Gain-Bandwidth Product (I _C = 10 mA, V _{CE} = 10 V, f = 100 MHz)	f _T	300 500	— —	MHz
MMCF708 MMCF2369, MMCF3227				
Output Capacitance (V _{CB} = 5.0 V, I _E = 0, f = 1.0 MHz)	C _{ob}	— —	6.0 4.0	pF
MMCF708 MMCF2369, MMCF3227				

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