



EMIF08-2005QEJ

IPAD™

EMI FILTER INCLUDING ESD PROTECTION

APPLICATIONS:

Where EMI filtering in ESD sensitive equipment is required :

- Computers and printer
- Communication systems
- Mobile phones

DESCRIPTION

The EMIF08-2005QEJ is a highly integrated device designed to suppress EMI/RFI noise in all systems subjected to electromagnetic interferences. Additionally, the EMIF08-2005QEJ filter includes an ESD protection circuitry which prevents destruction when subjected to ESD discharge up to 15kV.

BENEFITS

- EMI symmetrical low-pass filter
- Low PCB space consuming: 9 mm²
- Very thin package < 1 mm
- High reliability offered by monolithic integration

COMPLIES WITH THE FOLLOWING STANDARDS:

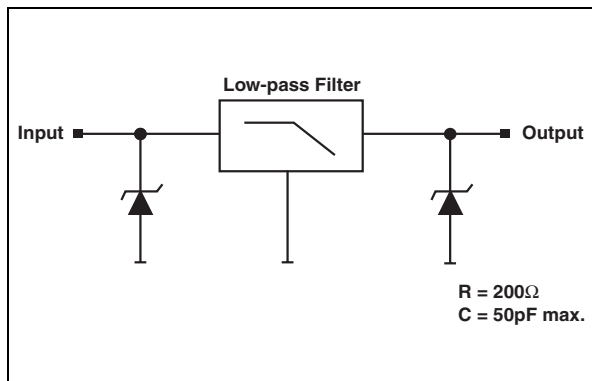
IEC61000-4-2:

- 15kV (air discharge)
- 8kV (contact discharge)

MIL STD 883E - Method 3015-7 Class 3:

- 25kV (human body test)

Figure 3: Basic Cell Configuration



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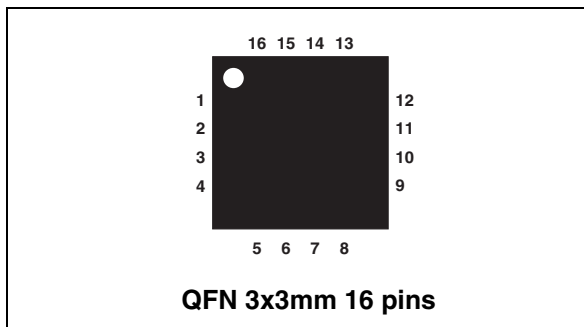
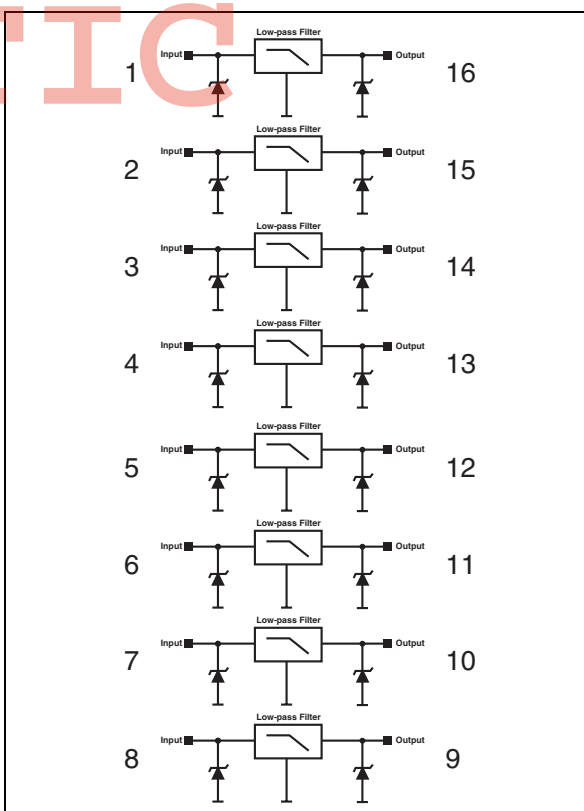


Table 1: Order Code

Part Number	Marking
EMIF08-2005QEJ	EM08

Figure 2: Pin Configuration



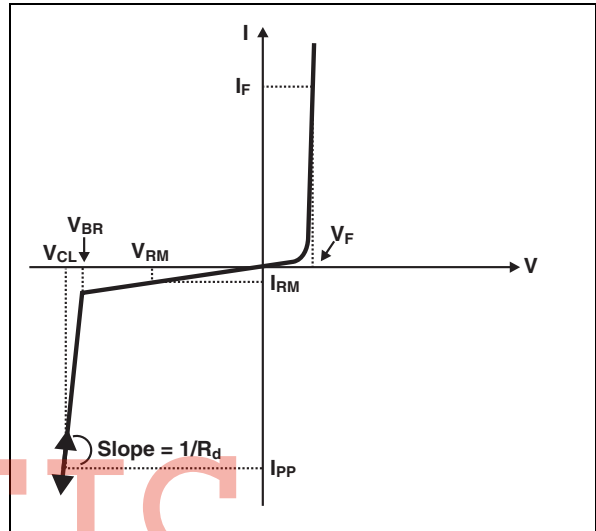
EMIF08-2005QEJ

Table 2: Absolute Ratings (T_{amb} = 25°C)

Symbol	Parameter and test conditions		Value	Unit
V _{PP}	ESD discharge	EC61000-4-2 air discharge IEC61000-4-2 contact discharge	± 15 ± 8	kV
T _j	Junction temperature		125	°C
T _{stg}	Storage temperature range		- 55 +150	°C
T _L	Maximum lead temperature for soldering		260	°C

Table 3: Electrical Characteristics (T_{amb} = 25 °C)

Symbol	Parameter
V _{BR}	Breakdown voltage
I _{RM}	Leakage current @ V _{RM}
V _{RM}	Stand-off voltage
V _{CL}	Clamping voltage
I _{PP}	Peak pulse current
αT	Voltage temperature coefficient
V _F	Forward voltage drop
R _{I/O}	Series resistance between Input & Output
C _{line}	Input capacitance per line



Symbol	Test conditions	Min.	Typ.	Max.	Unit
V _{BR}	I _R = 1 mA	6	8	10	V
I _{RM}	V _{RM} = 3V per line			500	nA
R _d	I _{PP} = 10A, t _p = 2.5μs		1		Ω
R _{I/O}		180	200	220	Ω
C _{in}	V _{bias} = 0V F = 1MHz V _{osc} = 30mV		45	50	pF

Figure 3: Filtering behavior

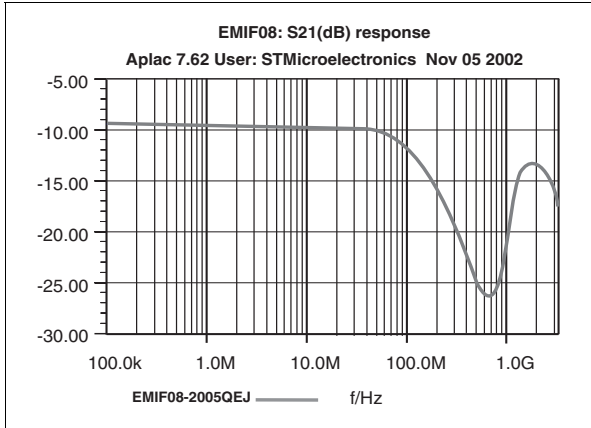


Figure 4: Capacitance versus reverse applied voltage

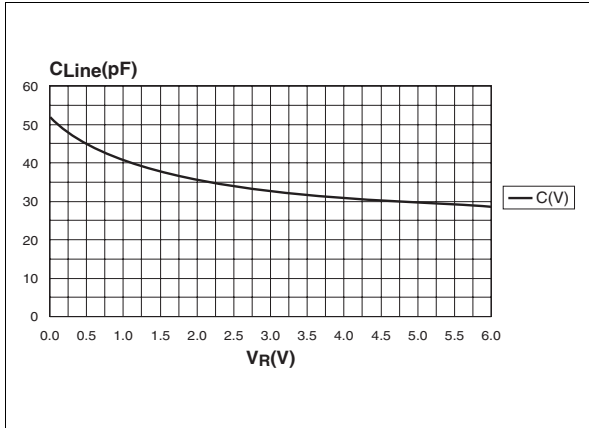
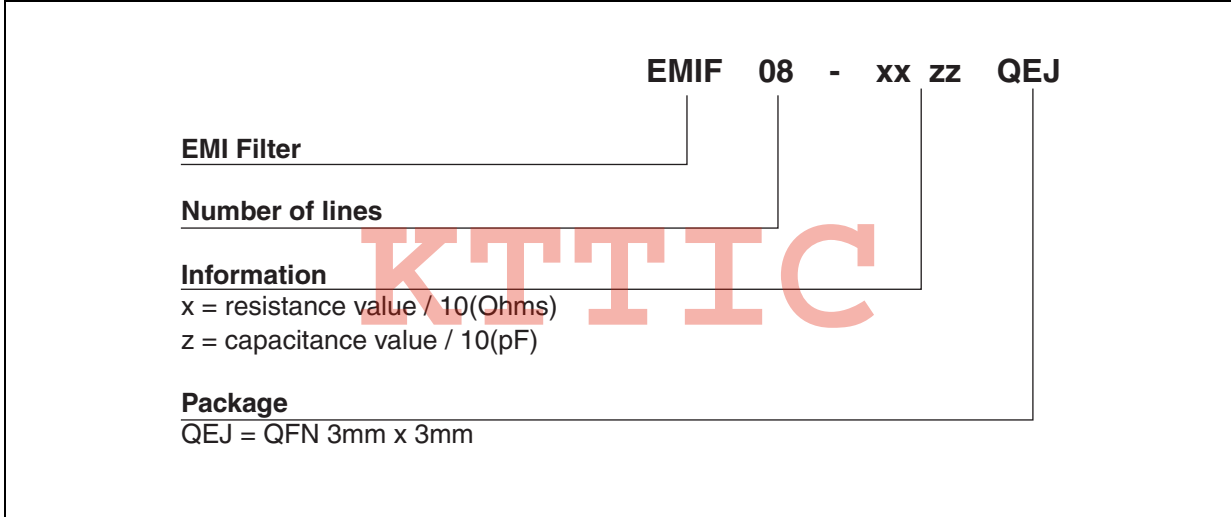


Figure 5: Ordering Information Scheme



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Figure 6: QFN Package Mechanical Data

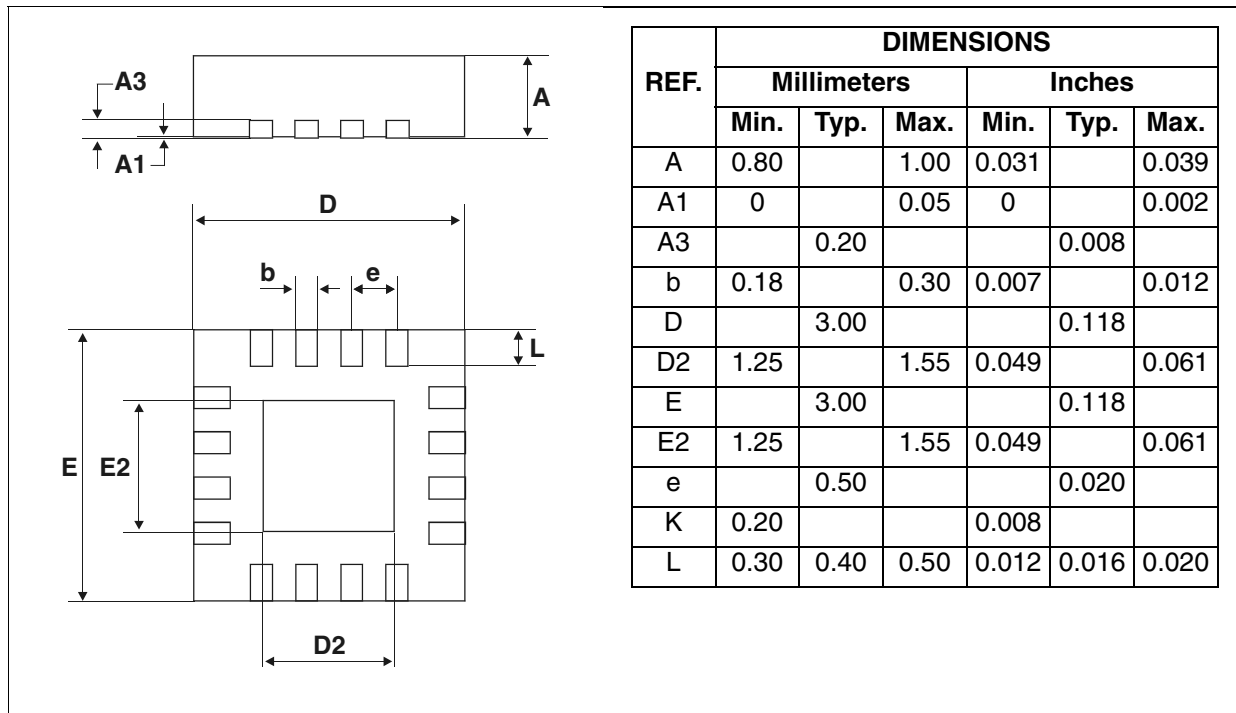


Figure 7: Foot Print Dimensions (in millimeters)

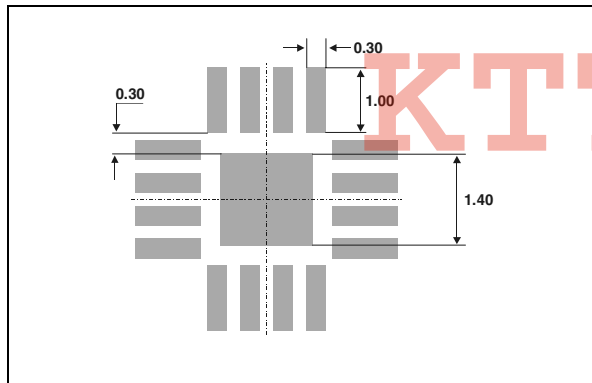


Table 4: Ordering Information

Ordering code	Marking	Package	Weight	Base qty	Delivery mode
EMIF08-2005QEJ	EM08	QFN 3x3 16 pins	22.1 mg	3000	Tape & reel

Table 5: Revision History

Date	Revision	Description of Changes
Dec-2002	2A	Last issue.
03-Jan-2005	3	Minor template update. No content change.
01-Apr-2005	4	QFN package mechanical data update: 1/ References A typ., A1 typ., b typ. D2 typ. and E2 typ. removed. 2/ Reference D2 changed from 0.25 min. to 1.25 min. and from 1.25 max. to 1.55 max. 3/ Reference E2 changed from 0.25 min. to 1.25 min. and from 1.25 max. to 1.55 max. 4/ Footprint updated, in compliance with IPC-SM-782.

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