

APPLICATION

EMI Filter and line termination for USB upstream ports on.

- USB Hubs
- PC peripherals

FEATURES

- EMI/RFI filtering.
- ESD Protection to IEC 61000-4-2 Level 4.
- Low insertion loss.
- Good attenuation of high frequency signals.
- Low clamping voltage.
- Low operating and leakage current.

DESCRIPTION

The USB specification requires upstream ports to be terminated with pull-up resistors from the D+ and D- lines to V-bus. On the implementation of USB systems, the radiated and conducted EMI should be kept within the required levels as stated by the FCC regulations and EMC compatibility, the computing devices are required to be tested for ESD susceptibility.

The PG0224US6 provides the recommended line termination while implementing a low pass filter to limit EMI levels and providing ESD protection which exceeds IEC 61000-4-2 level 4 standard.

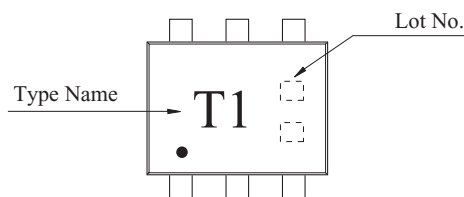
The US6 package is the same size as SOT-363 in JEDEC standard.

MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Dissipation	*P _D	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C

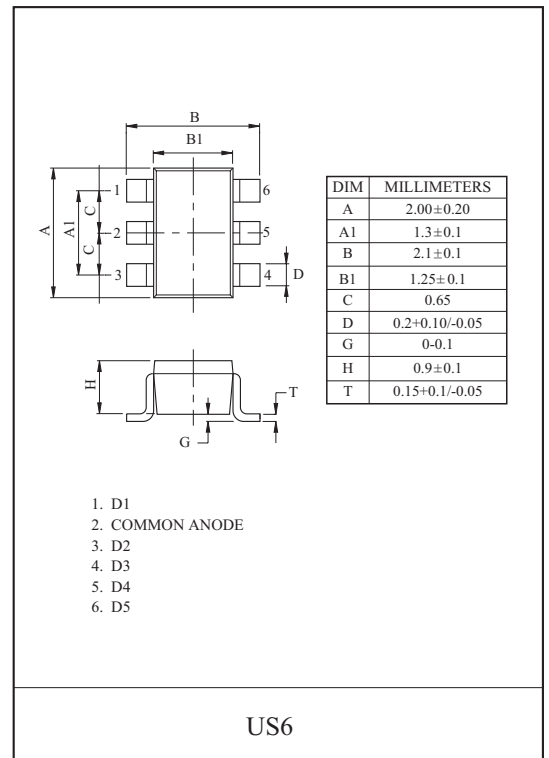
* Total Package Power Dissipation

MARKING

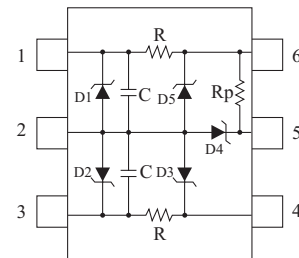


ELECTRICAL CHARACTERISTICS (Ta=25 °C)

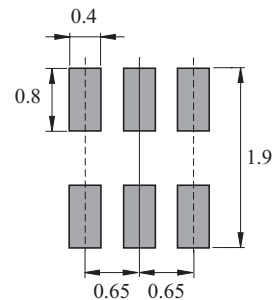
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V _{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V _{BR}	I _t =1mA	6	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =3.3V	-	-	0.5	μA
Resistance	R	Between Input and Output	-	22	-	Ω
	R _p	Between Pin5 and Pin 6	-	1.5	-	kΩ
Capacitance	C	V _R =2.5V, Between I/O Pins and GND	-	47	-	pF



EQUIVALENT CIRCUIT

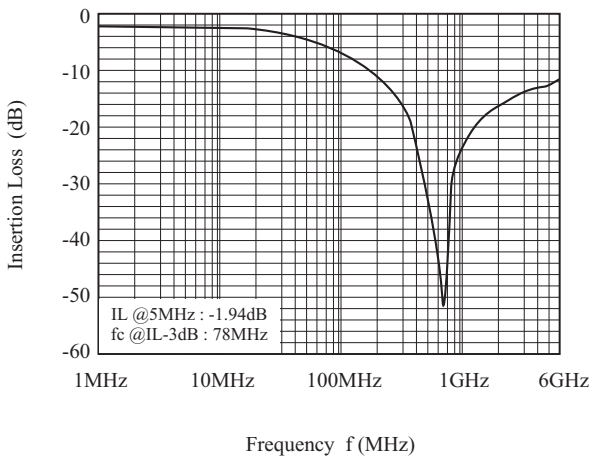


RECOMMENED FOOTPRINT (dimensions in mm)

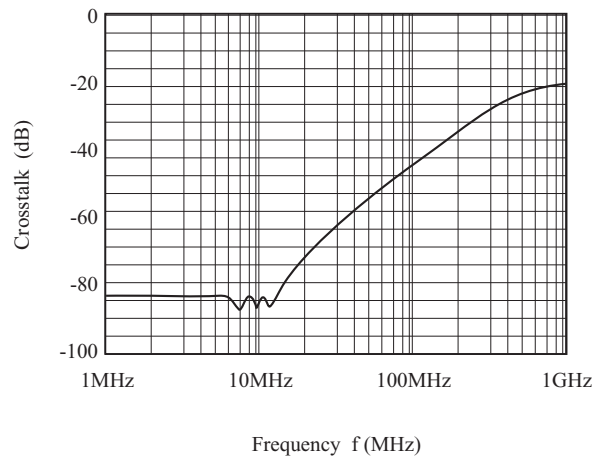


PF0224US6

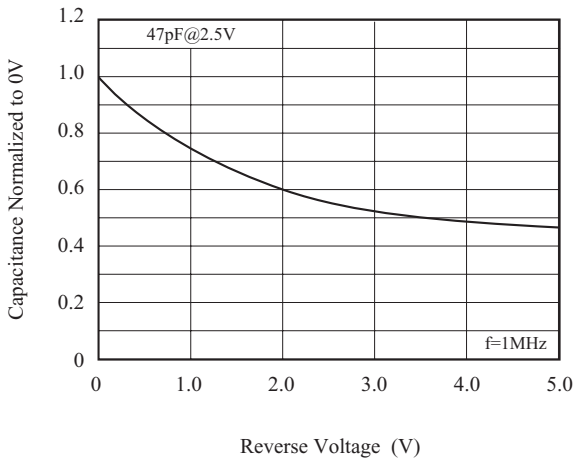
S₂₁ Attenuation



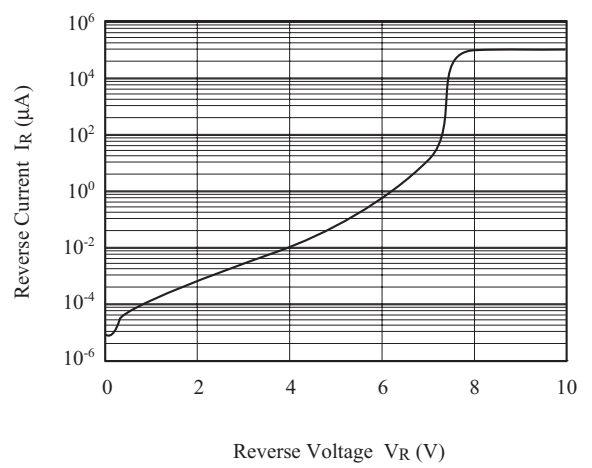
Analog Crosstalk



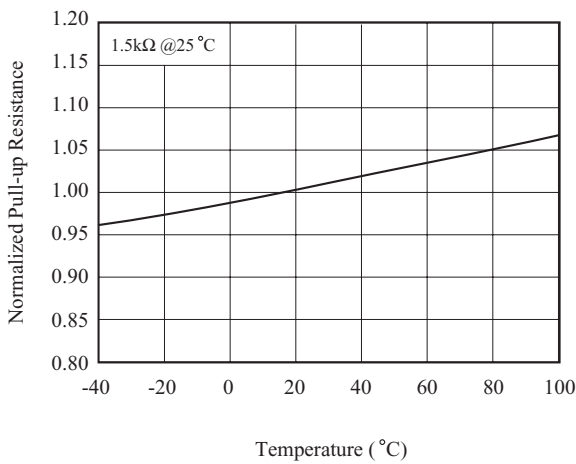
C_T - V_R



I_R - V_R



Pull-up resistance(kΩ) - T_a(°C)



Series resistance(Ω) - T_a(°C)

