

Protection of RS-485 Transceivers.

FEATURES

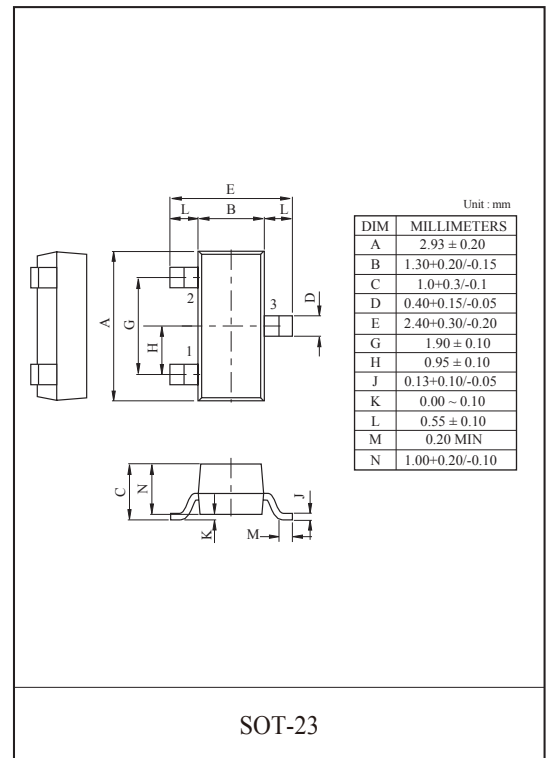
- 400 Watts peak pulse power ($t_p=8/20 \mu s$)
- Transient protection for data lines to IEC61000-4-2(ESD) 15kV(Air), 8kV(Contact). IEC61000-4-4(EFT) 40A ($t_p=5/50 ns$) IEC61000-4-5(Lightning) 12A ($t_p=8/20 \mu s$)
- Standard SOT-23 Package.
- Protects two +12V to -7V lines.
- Low Capacitance.
- Low Clamping Voltage.
- Suffix U : Qualified to AEC-Q101.
ex) PG712FBS23-RTK/HU

APPLICATIONS

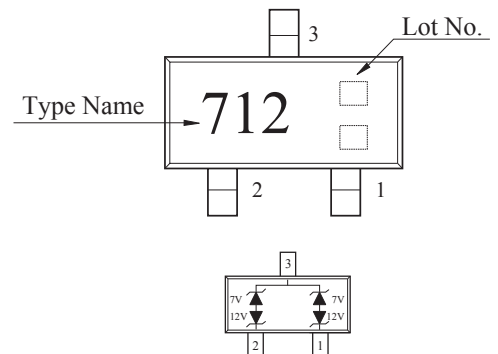
- Protection of RS-485 transceivers with extended common-mode range.
- Security Systems.
- Automatic Teller Machines.
- HFC Systems.
- Networks.

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power ($t_p=8/20 \mu s$)	P_{PK}	400	W
Peak Pulse Current ($t_p=8/20 \mu s$)	I_{PP}	17	A
Operating Temperature	T_{opr}	-55 ~ 125	°C
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ 150	°C



Marking



PG712FBS23

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Pin 3 to 1 & Pin 3 to 2 (7V TVS)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	7	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	7.5	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=7V$	-	-	20	μA
Clamping Voltage	V_C	$I_{pp}=5A, tp=8/20 \mu s$	-	-	10	V
		$I_{pp}=17A, tp=8/20 \mu s$	-	-	12	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	75	pF

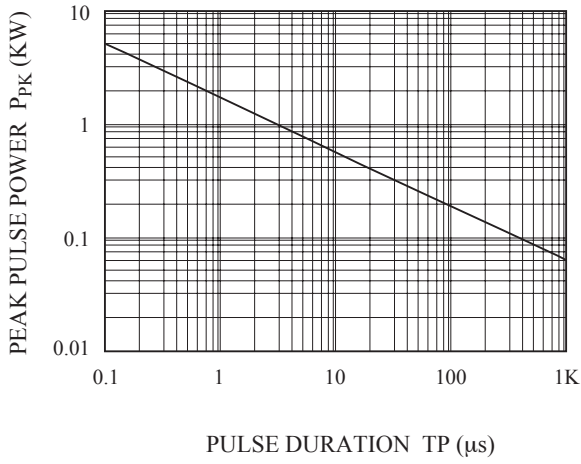
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Pin 1 to 3 & Pin 2 to 3 (12V TVS)

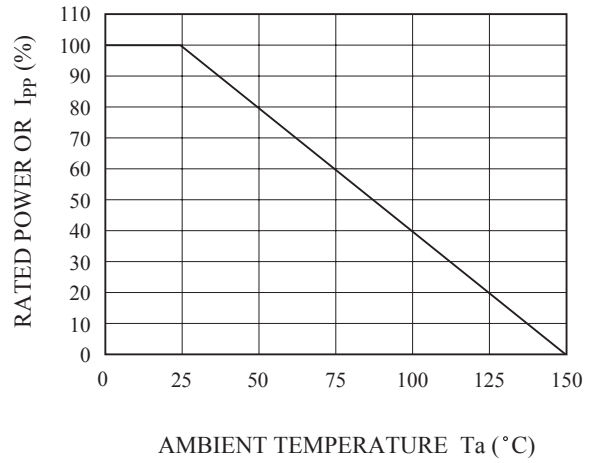
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.3	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=12V$	-	-	1	μA
Clamping Voltage	V_C	$I_{pp}=5A, tp=8/20 \mu s$	-	-	20	V
		$I_{pp}=17A, tp=8/20 \mu s$	-	-	26	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	75	pF

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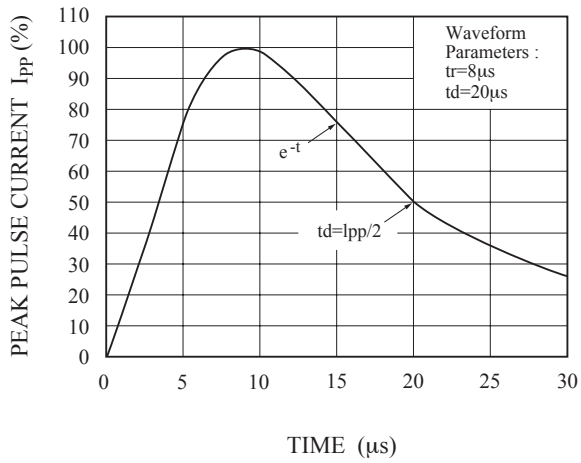
NON-REPETITIVE PEAK PULSE
POWER VS. PULSE TIME



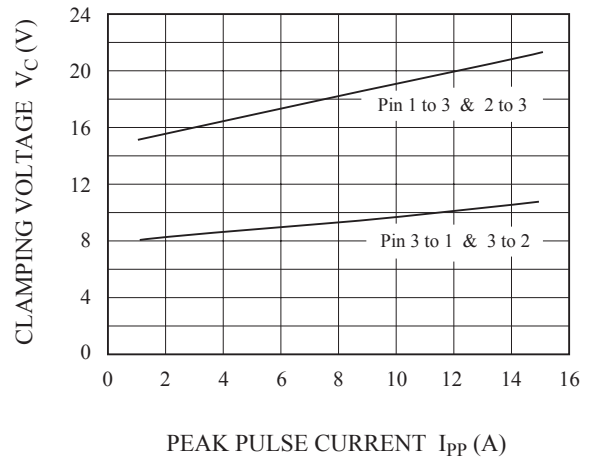
POWER DERATION CURVE



PULSE WAVEFORM



CLAMPING VOLTAGE VS.
PEAK PULSE CURRENT



CAPACITANCE VS.
REVERSE VOLTAGE

